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WELFARE & INDUSTRIAL EQUIPMENT

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JANUARY, 1953 1s. 6d

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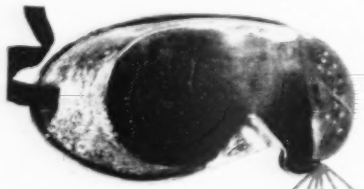

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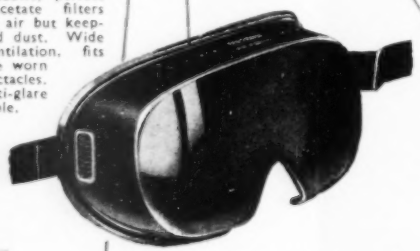
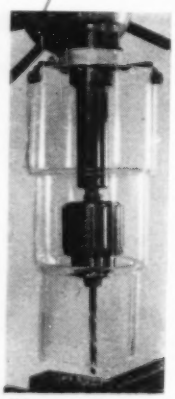


"*Panorama*" 216A Furnace Inspection and Gas Welding Goggle. B.S. 679: 1947. G.W.2.—Shade No. 4 (green). The perfect goggle for furnace inspection, certain gas welding operations, and recommended for welders' mates.



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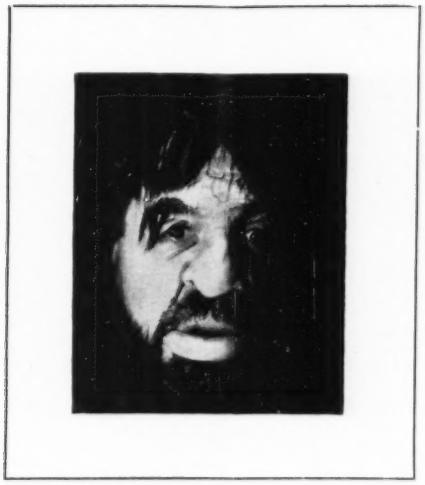

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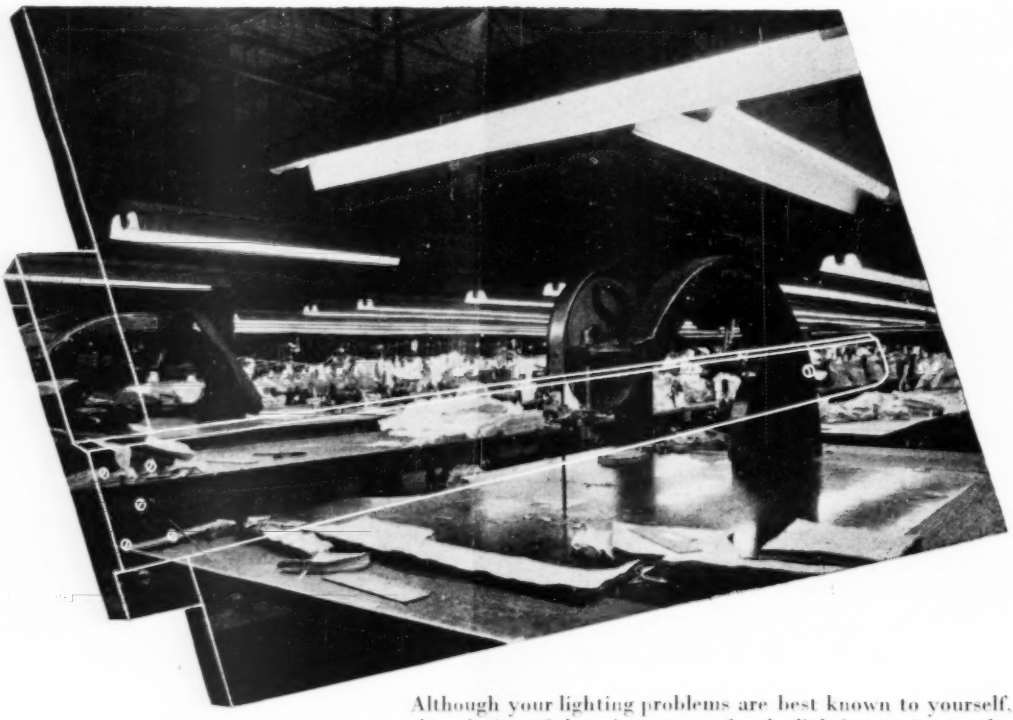

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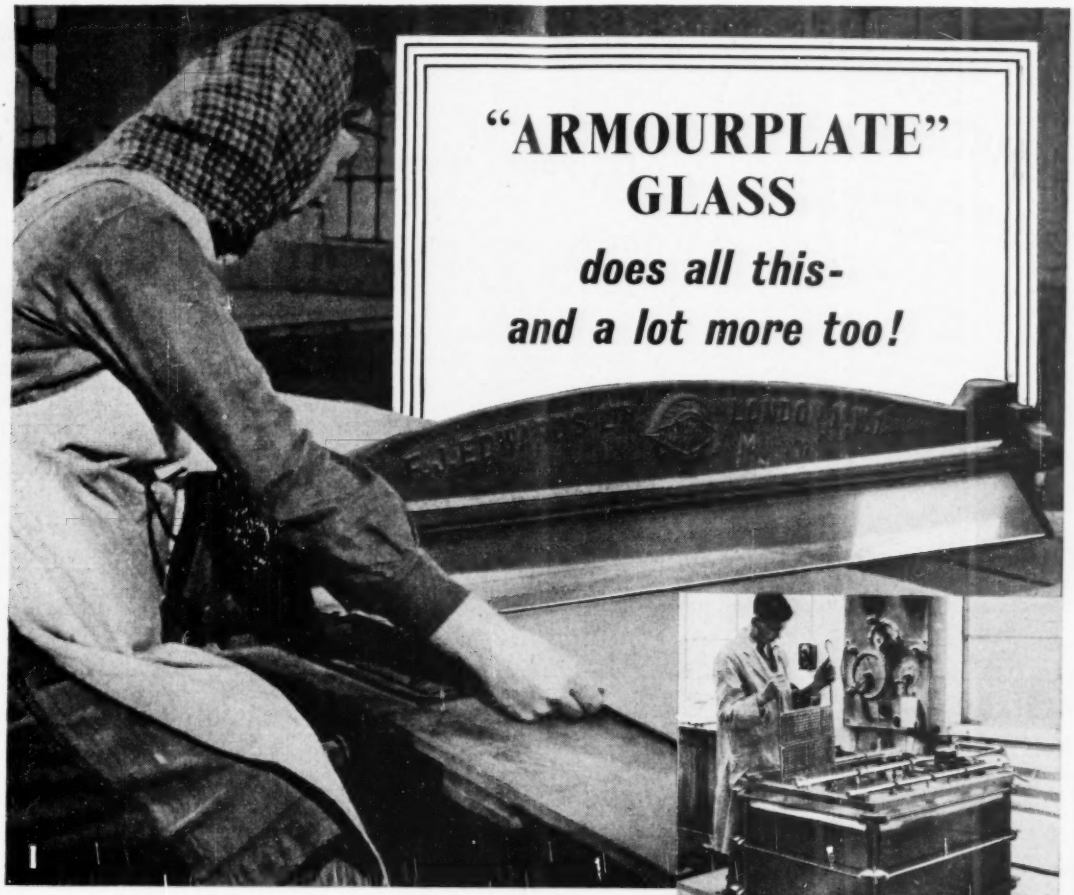

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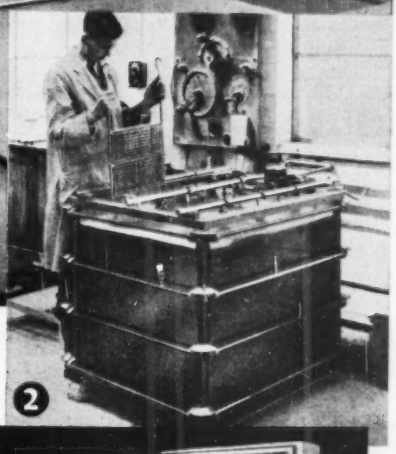

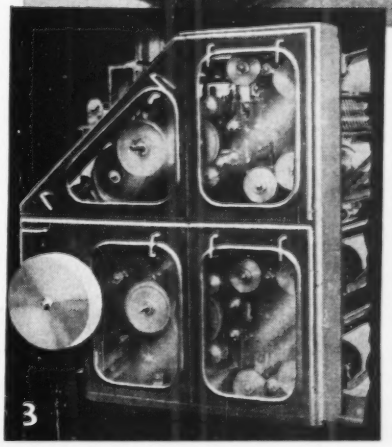

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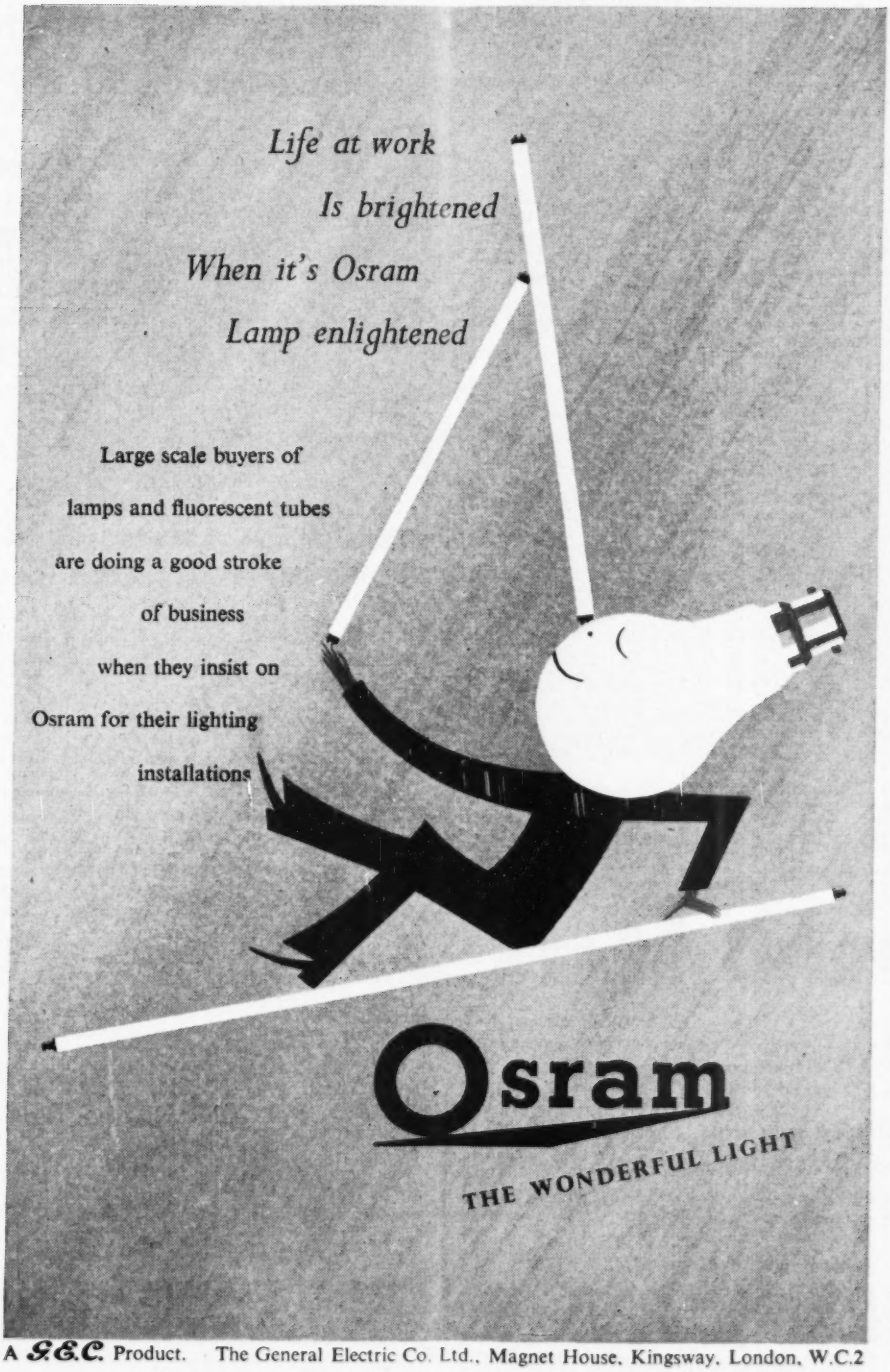

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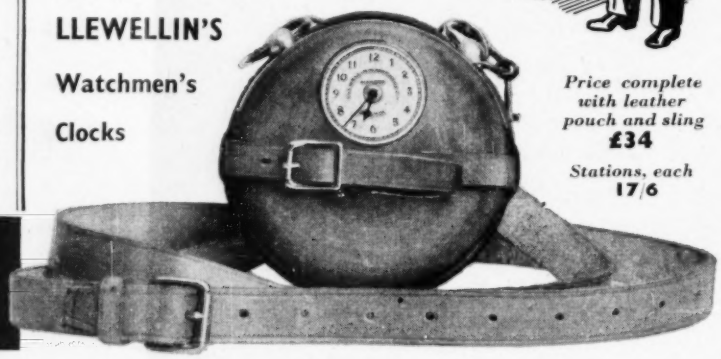

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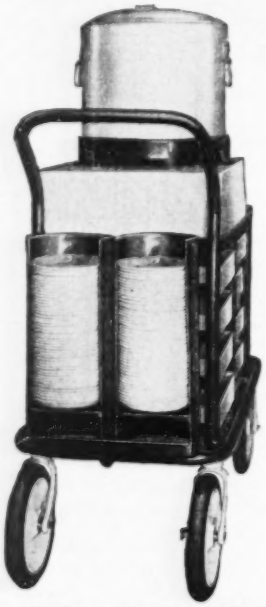

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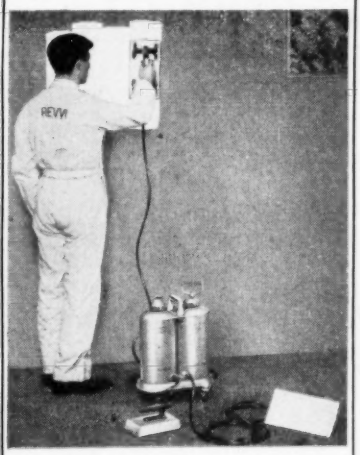

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PERSONNEL MANAGEMENT WELFARE AND INDUSTRIAL EQUIPMENT

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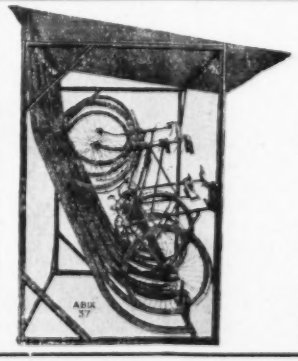

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Efficient Ventilation Protects the Worker *and* the Works

By A. C. MANN, M.I.H.V.E.

In response to many requests from readers, the author follows up his article on factory heating (October, 1952) with a descrription of ventilating methods which have been found effective in increasing production, decreasing sickness absenteeism and preventing damage to factory interiors by condensation and corrosion.

GOOD ventilation is as necessary as proper heating where numbers of people are working together. The increase in production possible in healthy working conditions and the decrease in absenteeism through sickness will quickly repay the cost of a suitable ventilating system.

The need for ventilation is perhaps not always so apparent as that for, say, lighting or heating, but it has been found that from 5 to 15 per cent higher output per operative is possible in a well-ventilated building compared with a badly ventilated one. One reason for ignoring this question in the past may have sprung from our temperate climate; but with the modern trend of getting as much done in as small a space as possible, and with the increasing use of machines—all heat producers—it is all the more necessary to provide sufficient air for the occupants.

Further, where the operations involved produce heat or fumes, dust, steam or other impurities, it is essential to keep the air moving in such quantity and in prescribed directions so as to maintain healthy conditions.

This removal of impurities can also be a means of protecting the building as, for instance, where open vats are emitting steam, acid vapours or the like, which would, if not controlled, quickly affect roof linings and steelwork.

For all normal industries, it is usual to fit ventilators in the roofs of single-storey buildings. They can be either mechanically operated or non-powered, and their function is to promote a circulation of air from the working level to the roof, where the vitiated air is discharged to atmosphere.

In principle, the roof ventilator (of which there are many types and makes) relies on the natural buoyancy of the heated, vitiated air in the building for its operation in allowing this air to pass through. Modern makes of these ventilators are designed so that the air movement outside the building assists the removal of the inside air by providing upward currents in the ventilator, the outside air being prevented from passing downwards into the building. In a properly designed ventilator the rate of air flow is not unduly increased by high winds.

It is important that sufficient properly sited inlets are placed around the walls of the building, otherwise the ventilation will be "patchy" or even non-existent at the lower levels. It is not desirable to use doors or opening windows for this purpose, as they may not always be open, and in any case cold draughts may be experienced if the openings are of insufficient size.

Inlets can be natural openings from other parts of the building, or louvred type inlets of sufficient area to allow the air to enter at a low velocity, thus obviating draughts. Where possible these inlets should be so arranged that in winter the air enters from heated parts of the building, but where this is impossible provision should be made for warming the air. This can be done in a number of ways—with unit heaters having air ducts connected through the walls of the building to introduce fresh air, radiators in front of the wall ventilators, and so on. For buildings in dirty

surroundings it may be necessary to filter the air entering the building, otherwise conditions inside may be worse with such ventilation than without.

Particular care should be taken to see that the heaters or radiators are regularly inspected and cleaned, as dust settling on them will reduce their efficiency, and apart from the loss of heat, cold draughts will be felt.

While on this question of regular inspection, it should be noted that maintenance of any ventilating or heating plant is as important as that of machines and tools, for in addition to the loss of production arising from unsatisfactory conditions, increased fuel bills will result.

Foundries and Laundries

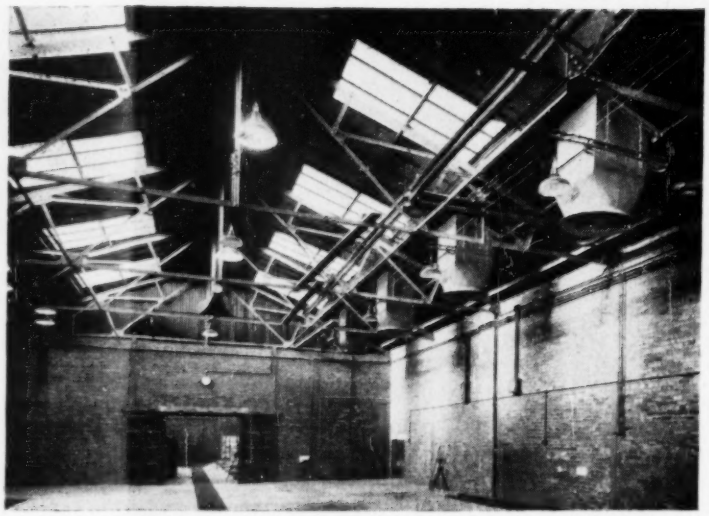
In foundries, laundries and other buildings where large amounts of heat and fumes are liberated, a ventilator with a big area of opening and which can be partly or wholly closed, in accordance with inside conditions, may be advisable. Such a ventilator must be either of a type that will not allow air to enter from outside, or that can be adjusted or closed at will, otherwise uncomfortable conditions will prevail on cold mornings before the plant has warmed up.

The unit type of ventilator suits many industries. When fitted with an electric fan it can draw air through filters, or reverse the air flow if desired.

Another method of ventilating factories is by means of air ducts from a central plant, with the air supplied to the rooms through grilles or other outlets. This system is normally combined with the heating system, with warm air supplied during the winter and unheated air distributed in summer. It is particularly suited to factories where definite quantities of air are required throughout the building. It is a more positive method than the unit type of ventilating system, and in a more elaborate form is used in the cotton industry where exact conditions as to temperature and humidity are required.

(*Keith Blackman Ltd. photo.*)

An example of a central ventilating system. This installation is to supply filtered air to a machine room for plastics. Heaters in each branch maintain exact temperatures.



(*Copperad Ltd. photo.*)

Large quantities of warmed fresh air are admitted through these high-temperature hot water unit heaters, equipped with special air inlets and diffuser outlets.

The air-duct system comprises a fan drawing air from outside the building and passing it through ducting into the building. The air can be filtered, heated, washed and otherwise conditioned before it is admitted to the working space, and automatic controlling devices are available to ensure that it is delivered in the proper condition and at the correct rate.

Whenever possible, the air, after it has been introduced into the working spaces, should be drawn away through another series of grilles by extract ducting to another fan, when it can either be discharged as waste or, if not contaminated by fumes, etc., partly or wholly taken back to the supply system for re-use in the building. This method, if used in winter, will reduce the amount of heating required, as the circulated air will be at a higher temperature than the original outside air. The same principles apply here as mentioned earlier. Inlets and outlets must be arranged so that air is moved through the whole of the ventilated area, and short circuiting must be impossible. When the balanced system of ventilation is used it is usual to extract less air than is being supplied (about 75-85 per cent of the supply) to ensure that there is a slight pressure maintained in the building. Any air leaks will thus be outwards rather than inwards.

In factories where the process involves the use of acids, materials which form dusts and so on, these impurities must be removed before they can do harm to the workers or to the building structure. It is usual in such cases to provide separate exhaust plants with hoods over the machines or tools and a system of ducting to carry the impurities thus formed to a fan for discharging to atmosphere.

In joinery works the provision of an exhaust plant is an economic proposition as labour is saved in sweeping and bagging the wood waste and sawdust. Waste can be handled mechanically and discharged into an incinerator, which can be attached to a heater for providing hot water or steam for processing and central heating.

When can electronic guards be used on presses? How reliable are they in practice? The answers to these questions form a sizeable part of the two latest reports—discussed here by our contributor—to be issued by the Factory Department on the fencing of press brakes and hydraulic presses.

How—and When—to use Photo-Electric Guards

By **ROBERT McKOWN**, *formerly Editor, "British Journal of Industrial Safety" and "Industrial Accident Prevention Bulletin".*

RECENT official reports* on the fencing of press brakes and hydraulic presses are notable for the amount of attention they give to the use of photo-electric devices for protecting press operators. The possibilities of such devices have often been urged and as often questioned. In theory they offer an attractive solution to the problems that arise when press operators cannot be protected by the use of a fixed guard. Some people, however, have doubted how far they would prove reliable in practice.

Two sub-committees of the joint standing committee in the use of power presses have now given implied approval to these devices by including them in the precautions that may be adopted for the guarding of press brakes and hydraulic presses respectively. It is important to appreciate the terms on which this approval has been given and the factors which must be considered by those who think of adopting photo-electric devices as a form of press guarding.

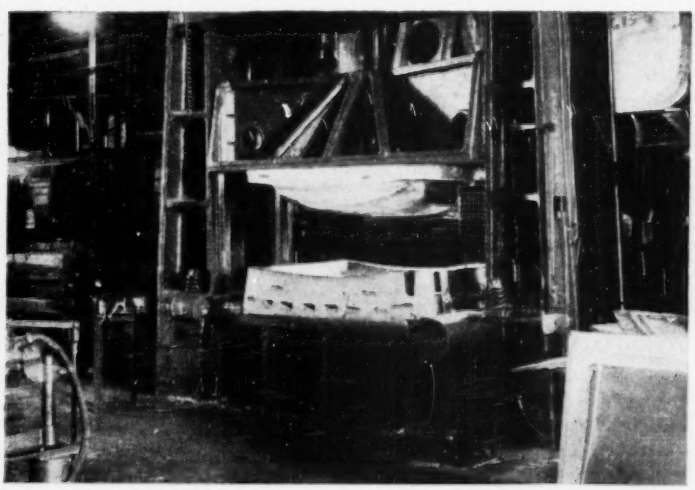
First and foremost, it must be remembered that these devices, like all other forms of automatic protection, are legally permissible *only when fixed guards—static or interlocked—are impracticable owing to the nature of the operation.* Even with press brakes, where fixed guards are usually regarded as impracticable, some of the operations carried out are very similar to ordinary power-press work. The press brake sub-committee is apparently satisfied that static or interlocked fixed guards can be used for a wide range of operations.

Once it is established that a fixed guard is impracticable for the particular press and operation in question, it still remains to be decided whether a photo-electric device can be used successfully. The press brake sub-committee in particular has emphasised the fact that such devices will not be suitable for all machines and operations, and that their field of use may be very circumscribed.

Before a photo-electric device is considered to offer adequate protection to the operator of a bending brake or hydraulic press it must satisfy at least four conditions:

1. It must prevent the slide coming into motion while any part of a person is within the danger area.
2. If a person approaches the danger area while the slide is in motion, movement of the latter must be stopped before trapping occurs.
3. The device must, so far as possible, "fail to safety," i.e., if it breaks down the machine must automatically be prevented from operating.
4. Adequate steps must be taken to ensure that both the device and

* *Fencing of Press Brakes* and *Fencing of Hydraulic Presses*, issued by the Ministry of Labour and National Service and published by H. M. Stationery Office, price 1s. 3d. and 1s. respectively.



(Sargrove Electronics Ltd. photo.)

The electronically-controlled pneumatic guard system on this drop stamp "fails to safety" if the air pressure drops, the current fails, or the electronic mechanism is damaged.

the machine itself are well maintained and frequently tested.

The first of these requirements is comparatively easy to arrange by placing the photo-electric units in such a position that neither the hand nor any other part of the body can be moved into the danger area without the light curtain being interrupted. All that is then needed is to design the controls of the machine in such a way that it cannot be operated during an interruption of the light curtain.

Safety Margin

The second requirement is less easily met. If the operator moves his hand into the danger zone the slide has got to be brought to rest between the moment when the hand interrupts the light curtain and the moment when trapping is imminent. Experiments carried out on press brakes showed that the amount of time which could be allowed for the operation of the device and the stopping of the slide was, at most, three-tenths of a second. Further experiments showed that, on the particular machines being used, the slide could actually be brought to rest in less than this time, though the safety margin was only about a fiftieth of a second.

The figures just quoted will not be universally applicable, but they serve to show the extremely fine limits within which the device would have to operate and the high degree of accuracy needed in deciding whether the device would be effective on a particular machine. (In the experiments referred to, the tests were made with the aid of a cinematograph camera, by which the arm movements were photographed and timed.)

The third requirement—that the device should fail to safety—can be met up to a point. It is both possible and necessary to arrange that any failure of the light source or of the main electricity supply shall prevent the machine being operated. There are, however, some types of breakdown which would not result in failure to safety. This fact must presumably be accepted, as it was accepted by the Chief Inspector of Factories in his Report for 1950. All that can be done about such breakdowns is to guard against them as far as possible by care in the design, installation, and maintenance of the device.

This brings us to the fourth requirement—the vital importance of regular maintenance and tests. This is, of course, something that applies to all forms of safety device—even static fixed guards—but it is of even greater importance, if that is possible, when photo-electric devices are used. Not only the device itself but the machine on which it is fitted must be maintained in a high state of efficiency; the efficiency of the safety device will depend very largely on the efficiency of the clutch and brake. For instance, any loss in braking power owing to sluggish action or deterioration of the braking surfaces will mean that the slide will not be brought to rest with sufficient promptitude.

To sum up, development and experience of photo-electric safety devices for press brakes and hydraulic presses has reached the stage at which they can be adopted with confidence in certain circumstances and with certain strict precautions. What those circumstances and precautions are must be learnt by a careful study of the two reports mentioned.

Prize for Guard Design

A PRIZE of 100 guineas for a new design of power press guard was offered by Arthur Keats, chairman and managing director of Fisher and Ludlow Ltd., when he spoke at the annual dinner of the Birmingham Industrial Safety Group on November 25. The competition is to be run by the group.

Production figures of the big machines in Britain were lower than those of the United States, Mr. Keats said, because of the safety guards designed to comply with the regulations of H.M. Inspectors of Factories. Design of guards left much to be desired. It ought to be possible both to ensure maximum protection of operatives while achieving a guard that did not impede production. The biggest contribution that safety engineers could make would be to devise methods that would make the feed of material and the ejection of stampings more nearly automatic.

Tidiness Cuts Accidents

THE accident rate at Thomas Firth and John Brown's steel works, at Sheffield, has dropped from 2.98 to 1.68 since the firm started holding "Better Housekeeping" weeks four years ago. Gangways kept clear of scrap have meant easier manœuvring in handling materials and less risk of accidents. In this year's special week salvage came in at twice the normal rate.

Question & Answer

By JOHN LYMESTER

Mr. Lymester will be glad to answer readers' financial and legal questions, a selection of which, with his replies, will be published in this column.

Q. *Are there any provisions, apart from those contained in the Factories Act, which govern the condition of passages and stairways? In particular I am concerned to know the possibility of liability being incurred owing to a worn staircase.*

A. The Factories Acts requirements do not have general application. Employers are, however, placed under certain strict duties to employees by the common law and these duties bind all employers no matter what type of premises they occupy. One of these duties is to maintain a safe system of working and if a stair is patently unsafe and has to be used by employees in going about their job, then the employer will be liable if an employee is injured by slipping on it. It is, of course, always a question of fact whether or not a particular defect amounts to a breach by the employer of his strict duty to maintain a safe system of working.

This strict duty applies only to employees. Outsiders visiting the employer's premises will normally be classified as "invitees." Occupiers of premises are under a duty to take reasonable care to prevent accidents being caused to invitees, through the presence of unusual dangers of which they know or ought to have known. For there to be liability to visitors, therefore, an accident must be caused by an unusual danger and the unusual danger must either have been within the occupier's knowledge or have been such that he would have known of its existence had he used reasonable care. If a warning of danger is brought to the invitee's notice the occupier will not be liable if, disregarding the notice, the invitee suffers injury.

Q. *If a child has an income of £150 a year from scholarships, can the father still claim the child allowance?*

A. The child allowance for 1952/53 is £85 and is granted if a child is under sixteen years of age or, if over that age, is undertaking full-time educational instruction and has an income of under £85 per annum, excluding scholarships. Therefore, if the sole income of the child is from the scholarship, the parent can still claim the child allowance.

Equipment that Raises Output

Easier, Safer, Faster Welding with the "Hidden Arc"

By DENYS HAMILTON

Unskilled men have been trained in less than a week to operate shielded arc welding machines of the type described here. Made in fully-automatic and manually-controlled models, these machines are suitable for nearly all welding jobs.

GLOVES are the only protective clothing which need be worn by the operator of either the fully automatic or the manual shielded arc welding units tested recently by a member of this editorial staff. An unskilled man can be trained to use either machine in a few days, and, provided he does nothing stupid (like plunging his hand into the hot flux) he runs no risk of injury from the process.

In these machines, the welding arc is buried beneath a mound of flux. Further, the ability of the apparatus to use exceptionally high welding currents with small diameter electrodes results in welding speeds several times that which can be reached by conventional hand welding.

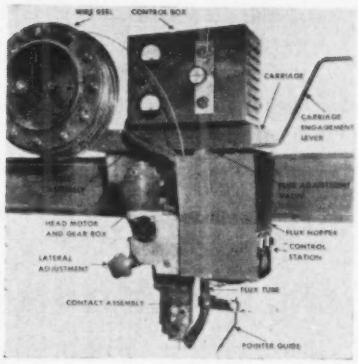
This is how these welders work: Granular flux is deposited on the joint which is to be welded. Bare metallic electrode is power-fed into the blanket of flux, its rate of feed being controlled automatically for proper arc length. Direct current, supplied by the generator which forms part of the outfit, produces the hidden arc between the electrode and the joint. The resultant arc heat fuses the electrode and the parent metal, producing a weld.

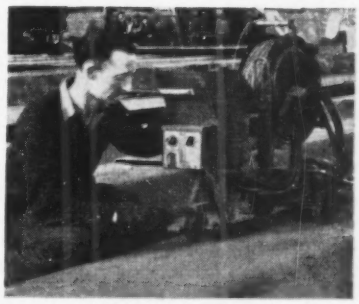
The flux adjacent to the arc melts, floats on the surface of the molten metal, and then solidifies as a slag on top of the weld. Since the arc and molten metal are blanketed by flux all the time, the weld metal is protected from the air, so that a high quality weld is produced.

The manually-operated model has a welding gun comprising a cone-shaped flux dispenser and a heat-treated electrode nozzle, insulated from the gun. Flux is dispensed by gravity through the copper cone tip. In the fully automatic model, the place of the gun is taken by a welding head. The apparatus can be mounted on a travelling carriage, a tractor, pedestal, etc., according to the type of work to be done. In each case the operator controls travel speed, welding amperage and arc voltage through the control box provided.

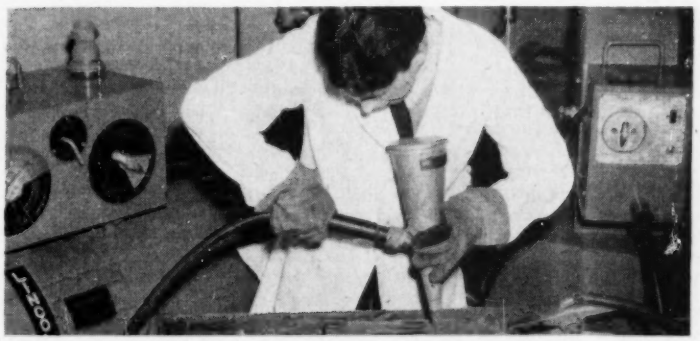
The arc is started by advancing the electrode until it contacts the joint, and then pressing the "start" button. The control automatically retracts the electrode, thus establishing the arc, and then maintains the arc length at the proper rate of electrode feed. The travel also starts automatically.

There is no spatter, and therefore the cost of weld cleaning is saved. The absence of spatter, smoke, fumes, radiated heat and visible arc means that the discomforts of open-arc welding are done away with. The result—an increased operating factor for lower welding costs.





Top: Component parts of the fully-automatic welder. Bottom: Prefabricating bulkheads with this machine in a shipyard.



(Lincoln Electric Ltd. photos.)

Light-weight welding gun and flexible cable of the manual model enable the operator to guide the electrode smoothly and easily.

MESSAGE FOR 1953 **As the New Year begins, a trade union leader, a steelworks director and a banker state their views on what they consider to be management's most pressing problem. The theme has been set by the Minister of Labour, in the extract quoted below.**

Our Future Depends on the Better Management of Men

SIR WALTER MONCKTON, Q.C., M.P.

Minister of Labour and National Service

WHAT can good management do to secure that essential condition of efficiency and progress? May I suggest five cardinal points *for your consideration?*

1. *SELECT men for the job with the utmost care, because if the individual is not matched to his task there are bound to be misfits and costly inefficiency.*
2. *TRAIN men systematically and continuously at every level from the bench to the manager's office, because without this, the capacity of the individual may be only partly developed (which is wasteful) and expensive mistakes may be made.*
3. *UNDERSTAND men—because without understanding it is impossible to get the friendly atmosphere of co-operation on which high output and high quality work depend.*
4. *BELIEVE in men and in their ability to find the right answer to any difficulty in an emergency. Trust them and let them know that you trust them—and that means giving them your confidence and informing them fully on all the facts of the industrial situation.*
5. *HELP men to give of their best, and that means doing everything practicable to provide good physical conditions and an environment conducive to good work.*

(From a speech at the annual banquet of the Joint Iron Council)

SIR WILLIAM LAWTHER, J.P.

President of the National Union of Mineworkers and a Member of the General Council of the Trade Union Congress

IF anyone has still the belief that there had been no changes in this century, then they ought to look and examine industrial relations fifty years ago and today. Except in a few Co-operative owned undertakings and a few far-seeing privately owned businesses, industrial welfare was practically unknown fifty years ago. The hope for Britain in these next few years lies in its further development. It is no longer a question of should it be done; it must be done, otherwise we will slip farther and farther down as an industrial power.

My message to your readers is that there must be a wider adoption of the view that the industrial worker is entitled to play a responsible part in the undertaking that he belongs to.

The Workers' Voice

It was over eight years ago that the Trade Union Congress issued a report on post-war re-construction wherein it was stated:

"The claim to share in the control of industry rests primarily on the simple democratic right of workpeople to have a voice in the determination of their industrial destinies."

This implies a change in industrial relations and outlook, but just as there has been a change in the industrial processes that the machine dominates, so likewise must there be a change in the human factor processes.

As we leave 1952 behind and enter a New Year, so must we enter it to fulfil the development of that conception of industrial welfare that has been worked out by the

organised workers in their Trade Unions and the undertakings that they work for.

The outlook for 1953 is grim. We have to face facts out of all proportion to those of any other year. To live as a nation, we have to have a higher output. To obtain that we have to recognise the part the worker has to play.

It is no longer a question of can we afford it. We cannot afford to be without it, and an ever-increasing development of industrial welfare must be accepted as of primary, not secondary, importance.

W. ROBSON BROWN, M.P.

A Director of Richard Thomas and Baldwins Ltd., and Member of Parliament for Esher, Surrey.

NEVER before in history has one section of men been set so many problems—political, technical, financial, human, and ethical. Never were their individual responsibilities so great.

What are these responsibilities? men, machinery and materials.

Machinery represents the greater part of the capital investment in industry, and the capital resources of the nation. *Do the men understand this?*

The materials of industry also, whether raw materials or manufactured products, whether home-produced or imported, are direct capital assets of the nation. *Do the men understand this?*

If they did, I would not have need to mention management's most complex problem, their relationship with their men. It is no less than to reduce economics to the language of the working man, to bring right home to him how he fits into the pattern. Technical education is not enough—it must go hand-in-hand with spiritual regeneration.

This is management's own special individual responsibility — their greatest challenge.

Too many workers have taken up entrenched positions and consider there can be no point of contact between them and management. Pride of craft is going. What are we putting in its place? You can increase a man's wages and shorten his working hours, and still he won't be satisfied, still he will continue to look upon management, upon the machine, and upon capital, as his enemies. He even takes up the same uncompromising stand against nationalised industry. Why?

Because of the dehumanising influence of industry. The man matters less and less, therefore he cares less and less. As his personal status sinks, so does his sense of personal responsibility. You cannot have it both ways. The good worker is submerged with the bad, and the general standard of all declines. Management is dissatisfied with labour, and labour is resentful of management, and there is a no-man's land between them which neither is wiliing to cross.

Why is it that we have had such a long sad history of industrial misunderstanding? Why has the dreadful economic crisis, and more particularly the dangerous industrial insecurity of our own country, failed to get home to the working man?

There is a solution. There is a formula, capable of both general and personal application. And it requires only one simple piece of mental acrobatics.

PUT YOURSELF IN THE PLACE OF YOUR GOOD WORKMAN IN YOUR OWN ORGANISATION. Look through his eyes at your organisation, at industry generally, and further at the national industrial problem. Whatever you think *you* want to know, find ways and means to get it over to him. Treat him as an equal. Have confidence in him as a man—then he will be ready to see your problems through your eyes.

SIR GEORGE SCHUSTER K.C.S.I., K.C.M.G., C.B.E.

Chairman, Human Factors Panel, 1948 Government Committee on Industrial Productivity. Author of "Christianity and Human Relations in Industry." Director, Westminster Bank, etc.

HUMAN relations problems cannot be solved merely by directions—no matter how well-intentioned—from top management. Management must find a way of combining leadership with partnership.

The key problem in industry is —how to inculcate a new appreciation of work? Most people at work today want to find something which gives meaning to their daily jobs. Happiness for every employee lies in good work well done, in conditions of liberty and an atmosphere of comradeship. Industrial managers must spread the creed that "work is service," and strive to give every employee a pride in his job, so that he does it to the best of his ability.

Material incentives are not enough —though they have their place. Management must solve the problem: how can we give our workpeople a faith and a cause to work for? Partly this can be done by recognising the groping desire of the worker to have more say in what is being done by his company, and helping to fit him to play a bigger part in its affairs. But the complete answer lies in helping to preserve a sense of spiritual values in the performance of his daily task.

The means are to hand. Christianity can provide the faith and the cause. I believe that the application of Christian principles to all our daily activities—included industrial work—offers the only sure hope for the survival of our form of industrial society.

A great responsibility—which is also a great opportunity—rests on the Church, but the Church alone cannot

accomplish what is needed. Laymen in industry must fight for the same cause and provide a setting in which Christian principles can *work*. An encouraging start has been made in some places. The effort must be nation-wide.

The response will come. Man is more than a mere money-earning and money-spending machine.

LEARNING BY DOING

Employers in Bermondsey, in conjunction with the L.C.C. have set up a day college for the continuing education of their young workers and to help bridge the gap between school and industry. The curriculum includes social studies, physical training, and discussion groups, as well as arithmetic, etc. Dressmaking is a favourite choice among girls, while boys can work in wood, metal or plastics.

Group Selection in a Small Firm

A. C. NIELSON AND CO. LTD., Oxford, employ about 400 people engaged in marketing research operations. The company's operating techniques are unique and no previous experience qualifies a candidate for a senior post. Further, a long period of training is required before appointment.

In dealing with its special selection problems, the company is using the group discussion method and psychological tests for traineeships leading to managerial and executive posts. (Testing by a psychologist is also a normal practice before promotion of existing staff.)

All applications are scrutinised and the obviously unsuitable ones eliminated. Factors considered are: quality of notepaper used; method of presentation; mistakes in grammar; general style; previous experience; salary required. This usually eliminates half the applicants. The remainder are sent details of the company, posts available, training and prospects. This usually eliminates another half of the applicants and ensures that those remaining are interested in the work at the salary offered. An application form is then completed which includes information on hobbies, special skills, family background, etc. (about 60 to 70 per cent of these are returned).

All remaining candidates attend group interviews. During discussions a psychologist and a company executive observe the candidates' individual reactions. They are ranked for physical bearing, dress, behaviour and analytical ability. Two subjects are introduced: one practical and one abstract and these must be of general interest and common experience. At this point unsuccessful candidates are told they have failed and may also be told why.

Successful candidates complete three written tests for clear thinking, educational attainment and mechanical aptitude. Individuals who do not attain minimum standards are eliminated. Successful ones are interviewed by the psychologist who gives a personality test. With the full results and personal histories before them, the psychologist and company executive short-list those suitable for the vacancies. Final selection is made by the directors and leading executives. Interviews at this stage may be by individuals or a board, but in either case a rating form is completed for each interview. A complete consensus of opinion is then taken and final selection made. (Condensed from *Personnel Management*, 9/52.)

All Change

A PACKER who became general manager for a day was among the members of the staff of Lewis's (Midlands) Ltd., Leicester, who changed jobs. The staff manager became lift operator, the merchandising manager a store porter, the merchandise officer a doorman, and the sales manager took a turn behind the counter.

The purpose of this change-over was to give the staff a sense of responsibilty and make them realise the difficulties of a senior executive's job.

At lunchtime the temporary executives dined in the staff restaurant, while the temporary counterhands, porters, etc., trooped off to the canteen. (Condensed from *Draper's Record*, 3/12.)

Housing Drive

PRENTISS COURT, named after the former medical officer of G. A. Harvey and Co. (London), is the company's contribution towards the housing drive. It is an extension to the seventy-two houses and maisonettes originally provided in 1935.

It is a mixed development, comprising twelve houses (including six maisonettes) of three bedrooms, sixteen flats with two bedrooms, and four with three bedrooms. The houses have two living rooms each and the flats one, together with a kitchen, bathroom and separate toilet. Fuel hoppers and refuse shoots are provided in the flats, and a small laundry is available for the use of tenants. The buildings are grouped round a small green, and both houses and flats have private gardens. Rents, inclusive of rates, vary from £1 14s. 6d. to £1 6s. 1d. per week. (Condensed from *Industrial Welfare*, 12/52.)

Blind For a Day

BLINDFOLDED for a brief period during a discussion on eye protection, a group of foremen were so impressed by the experience of temporary "blindness" that they redoubled their safety efforts. A variation of this idea has been carried out in some firms, where an employee has been blindfolded for a whole day, and recorded his experiences in an article in the house magazine. This personal angle gives added point to the safety message.

(Condensed from *Factory Management and Maintenance*, 10/52.)

Pensions from Profits

PENSIONS for employees of Young and Rubicam Ltd., London advertising agents, depend upon profits. Under this scheme, which has been approved by the Inland Revenue, the company is bound, in any year in which earnings reach a certain minimum, to pay contributions into the fund for each eligible employee at the rate of 5 per cent of salary after 3 years' service, 10 per cent after 4 years, and 15 per cent after 5 years. If profits do not reach this minimum, a proportion of the amount is paid in. In a bad year, no contributions may be made, but these can be balanced up in subsequent years if desired.

When an employee retires, the

amount standing to his credit is used to purchase an annuity. Joint annuities may also be bought to cover husband and wife. If an employee leaves before retirement he can get a smaller annuity or a cash payment. The fund is administered by five trustees—three directors and two employees—and administration costs are borne by the company.

This pension plan has advantages over the more stereotyped schemes, since benefit depends upon profits made by the company and is an incentive to long and loyal service. The trust agreement means, too, that if the company has a bad year, it does not have to meet the drain of heavy premium payments. Although the company has to bear the whole cost, tax exemption reduces the charge on net profits by 50 per cent, or more if the new excess profits' levy is taken into account.

This scheme is additional to life insurance benefit. All employees have policies in amounts not less than their year's salary. Those earning less than £850 a year pay nothing towards this insurance; others pay in proportion to salary. (Condensed from *Business*, 11/52.)

Opinion Poll

LIKE many progressive companies, the *South Bend Tribune*, Ind., U.S.A., inaugurated pension schemes, improved working conditions, tried to be fair on wages and salaries, and gave their employees reasonable security. But management did not know to what extent these facilities were appreciated by their employees, so they engaged a firm of industrial relations experts to find out. To ensure that employees could be completely frank in their comments, a secret ballot was held and management received only the final analysis. A report showing the voting on each question was also distributed to employees, together with details of the steps management was taking to correct any dissatisfaction revealed by the poll.

Questions asked included such items as: "I think my take-home pay is (a) completely fair, (b) reasonably fair, (c) somewhat unfair, (d) completely unfair." "I feel that my chances to advance in the company are (a) very good, (b) reasonably poor; (c) not too good; (d) very poor." Replies to this latter question showed that 33 per cent felt that chances were not too good and 14 per cent indicated that they were very poor. Commenting on this result, management pointed out that as labour turnover was relatively small, opportunities for promotion were limited.

A poll taken a few years ago contained many employee grievances regarding working conditions: the second poll showed a high degree of satisfaction with working conditions. (Condensed from *Sales Management*, 15/10/52.)

Ideas & News from House Magazines

Dramatic Success

More than 2,400 people attended the second annual drama competition of Richard Thomas and Baldwins Ltd., when eight one-act and three full-length plays were presented on six successive nights. The trophy went to head office for their production of Milton's "Comus" and J. B. Priestley's "Dangerous Corner." **(Ingot News.)**

New Canteen

Meltham Hall, fine old mansion standing in 25 acres of woodland, has been re-opened as a dining-room and social centre for employees of David Brown Tractors Ltd. **(News Letter.)**

Night Flight

Employees of Vernons of Liverpool recently flew to Blackpool to see "the lights." Half the party went by road and half by air, and changed places for the return journey. The planes circled over Blackpool so that the visitors could get a good view of the illuminations. **(Opportunity.)**

Training Centre

A new training centre for apprentices has been opened by Steel, Peech and Tozer Ltd. The centre has a lecture room, equipped for film shows, a small library and a workshop. A small stores in which apprentices take turn as storeman is designed to make the boys "stores conscious." **(Phoenix Gazette.)**

Apprentices' Day

John Laing and Sons Ltd., held their first apprentices' day last October, when prizes were presented by J. M. Laing. Three annual awards of £10 each were made for the best apprentice at work, for the best apprentice in technical studies and for general keenness and attendance. Monetary awards were also given for examination successes.

A film show was given after the prize-giving, and senior apprentices made a tour of head office, plant and transport depots. **(Team Spirit.)**

Self-expression Encouraged

Increased self-confidence and ability to talk to customers are some of the benefits gained from the classes which the John Lewis Partnership organise for their junior staffs in London. These classes are not vocational, but aim at giving a broad educational background. Subjects covered include English and current affairs, and students visit art galleries and museums, newspaper offices, the G.P.O. sorting office and similar places of interest.

Juniors attend classes one morning each week for a year. They receive full pay and any extra travelling expenses which they may incur. **(The Gazette.)**

The Mart is Booming

Experience of a year's working has proved that there is a ready sale for goods of all types through the Thorncliffe Mart, a medium whereby employees may buy and sell second-hand goods. Out of 2,489 articles received, nearly 2,000 were sold, and arrangements are being made for the mart to be opened on two days a week in future. **(Thorncliffe News.)**

THIS FIRM ENCOURAGES HOBBIES

Employees of Cadbury Bros. Ltd. can try out their skill in metal construction or repair work in a workshop at Bournville which has been put at their disposal. There to help and advise is H. F. Macdonald, a retired mechanic. The spare-time craftsmen can borrow tools and buy materials from the firm. This well-equipped workshop is open three nights a week from 5 p.m. to 9 p.m., and one morning a week—for those on night shift.

Budgetary Control Helps The Sports Club to Run Smoothly

It is best for management and members to share as partners the job of providing and spending sports and social club funds. That way mutual goodwill is most likely to be created. But expenditure should be carefully controlled, and this article explains how.

By W. F. HALL, *Secretary, Rolls-Royce Welfare Trust*

WHEN the opportunity arises for committees to put their hands into other people's pockets and acquire funds for financing sports activities, it is usually found that one of two attitudes is adopted. Either they are parsimonious to the point of irritability or so enthusiastic as to become extravagant.

Without some method of control it seems to be difficult for committees to steer a middle course and use funds judiciously. Control can be firm without being tiresome, and if the people who are providing the bulk of the funds get together with those who will be spending the money and both sides put their cards on the table, ways and means of administering the funds can be found so as to avoid any friction.

The methods of providing sports funds are diverse but some of the more usual are:

(a) Wholly by the participants on ground made available by the company;

(b) Shared between the company and the participants;

(c) Wholly by the company.

Obviously the second method is the most equitable arrangement, for in (a) the cost to participants might be irksome and in (c) true sportsmen abhor anything which savours of charity.

The next problem is to decide how the cost can be shared. In fixing the members' subscriptions, local practice (including both public and private ventures) can often act as a guide.

In large firms where the facilities are likely to be extensive, careful budgeting is essential. In an organisation with which I am familiar they have, throughout their several branches, many members, whose interests are divided between seventy-eight clubs, to cater for.

The method of budgeting is similar irrespective of geographical situation:

At each branch the sporting activities are controlled by a sports committee comprised of management's and employees' representatives. *Each section of sports has its own chairman, secretary and sub-committee.*

Each November these sectional committees meet and estimate their requirements for the next year and also what amount their likely membership fees will yield. In due course a schedule, fully detailed, is submitted by the sectional secretary to a full meeting of the sports committee.

Sectional secretaries long since have learnt to eschew such nebulous terms as "sundries," "miscellaneous expenses" or "contingencies." They know the use of such terms will only result in their application being referred back. Any unusual expenditure has to be supported by an explanation of its necessity or desirability.

When the sports committee meets, these estimates are considered in detail. Should it be thought that unnecessary items have been included, or necessities omitted, estimates are returned to the appropriate section for further consideration.

An example of what can be achieved in this way was furnished some years ago (as the prices quoted will indicate).

We were fortunate enough to secure some land for a sports ground for the use of our London depot who, naturally, wanted a pavilion to go with it. The London committee recommended that £600 should be earmarked for that object but their request was referred back

This picture of a factory netball game in progress epitomises our contributor's statement that money wisely used on healthy recreation is an asset, not an expense.

with the suggestion that something cheaper might suffice.

Out went their scouts and they came back with the amazing news that for £42 a modest little pavilion could be purchased at Finchley. Representatives went off to see this bargain and they decided that it would be suitable for a start, at any rate.

However, one of the conditions was that it was for sale "as it stood" which meant it would require dismantling, transporting and re-erecting. The London members were not dismayed, though many of them had to sacrifice a Whit-week-end to do the job. But they cheerfully accepted the responsibility.

This incident corroborates what a well-known writer recently said about welfare: "The experienced welfare officer never does anything for other people that they can do for themselves; he deals with their problems in a way that enables them to learn how to face up to difficulties and overcome them." Initiative in solving problems is of much greater value than "spoon-feeding."

The Company's Contribution

Sectional budgets which pass the scrutiny of the sports committee are in due course submitted by its chairman to the executive committee. Provided that body is satisfied, they are then transmitted to the finance committee for inclusion in their detailed report to the directors, who eventually decide what contribution is necessary to maintain the facilities in a reasonable manner, in addition to members' subscriptions and profits on social events and from catering.

Profits earned by members' efforts can greatly ease the burden which has to be shouldered by the company, but care should be taken when budgeting for such items and a conservative estimate is recommended.

Carefully organised dances and social events can be profitable and a steady income derived therefrom, but over these some control should be exercised. For example, during the season we hold regular Saturday evening "Old Tyme Dances" on our own premises. Though there is no licensed bar, considerable profits accrue. Numbered tickets are drawn by the organisers from the office and on Monday morning an account of the dance is produced. During the season a progressive chart of results is kept. Thus from actual experience, expected revenue can reasonably be forecast.

HOW ONE FIRM CONTROLS SPORTS CLUB SPENDING

1. **Costs shared between company and sports club members.**
2. **Estimated income and expenditure of sectional committees "vetted' by main sports committees.**
3. **Budgets then passed to management via sports club executive and finance committees.**
4. **Approved sectional budgets go to welfare office, who order all goods and services, check invoices and receipt of goods, etc.**
5. **Each section sees actual expenditure compared with its budget.**

Profits on catering can also be controlled. Where a licensed bar or café is in operation, the steward is "charged" with all supplies at *selling price*, and each month stock is taken so that the amount registered in the cash till (which is checked and emptied daily) should approximate to the amount of supplies consumed. Regularity in collecting cash and taking stock is essential in order to ensure that supplies are not disappearing mysteriously.

When producing the annual accounts, the result shown by the profit and loss account can be adjusted in the following way.

Should a profit result, then the company's grant for the ensuing year can be accordingly reduced. If the result be a loss, the amount required from the company can be adjusted (provided that there is a legitimate reason for such loss) or members' subscriptions can be revised.

After sectional budgets have been approved, a copy of each is sent to the welfare office, and as goods or services are required an official order is prepared there. No section is allowed to circumvent the rules by indiscriminate ordering. If any section disregards the instructions, a salutary lesson may be administered by requiring the members of the section concerned to supply the funds to meet any unofficial liability incurred.

Accounts are received, checked and paid by the office staff who, apart from certifying the invoice to be in accordance with the order (and that the goods have been received or the service rendered), take the precaution to obtain confirmation from the sectional chairman that such goods or services are to their satisfaction.

A certain amount of flexibility may be considered advisable, as prices quoted in budgets prepared in November are likely to have altered by the time the goods are required. If the company in making their grant can also place in reserve a small sum to cover such fluctuations, embarrassment can be avoided; but this reserve should not be regarded lightly and should be as stringently controlled as the other funds provided.

To make sports clubs realise their costliness it is a good idea to supply each section with an actual account of their expenditure alongside their budget when the final accounts are prepared, especially if fluctuating prices have necessitated calling on the company for use of any reserve fund.

Generosity can become as great a fault as niggardliness; a happy medium should be sought whereby both the company and the employees realise they are partners in creating mutual goodwill through the medium of sports activities. Money wisely used on healthy recreation can be regarded as an asset and not an expense.

Industrial C.D.Os.

THE Society of Industrial Civil Defence Officers was inaugurated at a meeting held in London last month. A. G. H. Brend (British Electricity Authority), one of the initiators of the new Society, was elected chairman and Maj.-Gen. J. S. Lethbridge, former commandant of the Civil Defence staff college, president.

Mr. Brend said the new body would be a voice for the industrial units in their "wilderness of disregard and neglect." He pointed out that there were 20 million workers in this country who were the responsibility of managements if an attack came in working hours. Managements, on the whole, had accepted this responsibility, but there had been a lack of official direction and top-level interest.

It was announced that the seventy industrial Civil Defence officers present at the meeting represented 65,000 enrolled Civil Defence workers. This was an indication of the potential forces among the 7,000 firms to which the Home Office had circulated the industrial Civil Defence bulletin.

Employees Need Not Suffer from Factory Feet

By PETER MYTTON-DAVIES

No worker can give of his best if his feet hurt him or are uncomfortable. Few people are born with foot defects, but many acquire them through wearing ill-fitting shoes. The ways in which the welfare officer can combat this bad habit are described in this article.

HOWEVER much care is taken to seat as many workers as possible, there are still many jobs in industry which have to be done standing. And although such operators may be given seats on which to rest between periods of activity, they have to be on their feet for the best part of the working day. Thus the importance of proper foot care is obvious, from the point of view of both the workers' comfort and production efficiency.

Fortunately, only a few people are born with inherent foot defects; unfortunately, many people—especially women—maltreat their feet, usually by wearing the wrong footwear.

With either sex, most sufferers are to be found among the over thirty-fives. At about that age many women tend to put on weight and any minor foot abnormalities which may exist are likely to cause trouble. Bunions, corns and aching feet become troublesome; indeed, some people seem to have been born with a potential bunion which, unless footwear has been carefully fitted, often develops about thirty-five years afterwards.

To tackle the problem of "factory feet" properly, anyone responsible for the workers' well-being must understand the foot's functions. These are:

(a) To provide a support for the weight of the body when standing, walking or running.

(b) To allow body movement by levering the body up when required.

(c) To absorb shock when walking, making quick, sudden movements such as turning round, or running.

The weight of the body is transmitted through the ankle to the heel, to the outside metatarsal head, and to the great toe joint or inner metatarsal. If a worker stands too long, the ligaments of the foot stretch, producing true foot strain; for when the body is in a standing position, the foot's ligaments and muscles have to hold it together to support the weight of the body. The reason why standing is more fatiguing than walking is simply that in the case of the latter, the muscles of the foot contract and expand as it moves; this enables the foot to carry on walking for a considerable time without feeling unduly tired.

The Right Shoe

Unfortunately, most women pay more attention to the style and fashion appeal of a shoe than to its fit and functional qualities. The house slipper, which is comfortable for wearing when sitting in front of the fire at home, or the light shoe, do not provide sufficient support for the foot when standing at the factory bench. Workers should be encouraged to wear the right shoes for the job in hand, bathe their feet once a day in winter and perhaps more frequently in hot summer weather, and to avoid wearing shoes which require to be broken in. They should be reminded that if, when buying shoes, they will walk a few steps in the shoe shop, they will have a better chance of avoiding ill-fitting models.

Young girls should be taught to avoid shoes with fronts too narrow for comfort, for the wearing of such shoes makes them walk on parts of the foot not intended to carry weight. Providing their feet have not suffered too badly in this way before they take up employment, serious trouble can be avoided by wearing sensible shoes.

The troubles which the welfare officer should look for in employees' footwear include:

1. Wearing the right shoes with too small a stocking.
2. Wrong heel height. Too high a heel thrusts the weight of the wearer's body on to the ball of the foot, which results in fatigue and strain.
3. Badly shaped fronts, especially those which come straight to a

This diagrammatic drawing illustrates the bones and muscles of the foot. Foot strain is produced when the worker stands too long, stretching the ligaments. Walking is much less tiring.

point at the toe for these bunch the toes inside. They are worst if they are too narrow.

4. Peep toe and sling backs, which are not suitable for wearing for long periods.

Workers should be encouraged to choose the style, size and fittting of their shoes in accordance with the size and shape of their feet rather than with the latest fashion. Shoes should be long enough, for if they are too short, trouble follows, especially when standing at the bench. The ankle joint will appreciate a snugly-fitting heel to a shoe which is to be worn for long working hours. The toes should have freedom, though this does not mean that shoes need necessarily be ugly and square-shaped. The space beyond the toes can be shaped to conform with the dictates of fashion. To support the long arch, the shank must have a "resilient rigidity" and yet it must allow the foot to flex.

How High The Heel?

The best shoes for work are those made of leather with heels of about 1¾ in. high. If possible, they should lace up. If a rubber sole is used, leather should be between it and the foot. For women with contracted muscles, heels should be no higher than 1½ in. Shoes should have a fairly thick sole and be stout enough to carry the wearer's weight by supporting the foot properly. The inner border should enable the great toe to have a straight run throughout its length. The sedentary worker can safely wear a lighter shoe for work than the factory operative

Badly worn shoes needing repair can cause as much trouble to the worker's feet as ill-fitting ones. When a new worker begins a job which necessitates much standing, her feet often swell and are painful at first. She should take the opportunity to get off her feet whenever there is a break. It is sometimes difficult to persuade newcomers to heavy industries to wear protective footwear which prevents many foot fractures, but such boots and shoes are being made in more fashionable styles and so should enjoy a better acceptance.

The welfare officer has to be concerned with the problem of the expectant mother's footwear during the early months of her pregnancy when she may still be working. Too sudden a drop from relatively high heels to very low heels may be harmful, especially if she turns up in the high heels again on odd days. The heels such a worker wears should be fairly broad and reasonably low. The extensive use of sandals is to be discouraged, for this type of footwear does not always provide sufficient support for the increase in the body weight of the wearer.

Fallen arches can be caused by bad circulation as well as by unsuitable footwear or insufficient exercise of the foot. The condition may also be brought about by too much exercise. While regular exercises may help such cases, if the condition is advanced, proper arch supports—not the sort which can be bought in the shop, but made to measure from a plaster cast of the patient's feet—should be used. The condition may become serious, especially in middle and advancing age, when the arteries may become affected, resulting in acute disability and ultimately in death.

Unfortunately, sufferers may be lulled into a false sense of wellbeing, for the middle-aged often experience less pain after their arches have dropped than they did earlier while the process was going on. In such cases the chiropodist must give way to treatment by the doctor and the foot specialist.

MANAGEMENT BOOKSHELF

Psychology in Plain Words

An Introduction to Industrial Psychology (5th Edition, revised). May Smith, M.A., D.Sc. Cassell & Co. Ltd. 12s. 6d.

IN his speech to the 1952 conference of the Institute of Personnel Management, the Minister of Labour referred to the "immense" amount of knowledge we had about the factors which influence industrial relationships. But he was not, he said, so sure that we could be proud of the extent to which the lessons learned had been applied over the greater part of British industry.

Dr. Smith makes the same point in the preface to this fifth edition of her invaluable book, which was first published in 1943. "Leaving on one side all research since the end of the 1914-18 war, a number of problems that arose in the 1939-45 war might have been, if not solved, at least minimised, by the application of the findings of the Health of Munition Workers' Committee." She puts her finger on the reasons why application has lagged behind research, but is guardedly optimistic about the future. Her book will certainly be a great help in spreading enlightenment.

In admirably clear English, she takes the reader through the whole field of industrial psychology, from a brief history of the pioneers to methods of research. Anyone who supervises the work of others, and who does not know this book, should get it right away.

Industrial Psychology. Joseph Tiffin. 553 pp. George Allen and Unwin. 35s.

ALTHOUGH there is no dearth of books on industrial psychology, the British publishers have rendered industry a service by making this American text-book available to readers in this country. The author makes it clear that he believes firmly in the advantages of the application of psychology to industry, but he never makes the mistake of over-emphasising these advantages or of hiding the many problems that have found no solution so far in this comparatively new science.

The book deals in detail with interviewing for the job, and quotes a large number of tests with which the mental ability, the mechanical aptitude, the dexterity of the employee and his personality as well as his visual skills can be measured. Further, it has chapters on training, inspection, merit rating, job evaluation, industrial fatigue, accidents and safety. In the concluding chapter the author explains morale surveys which are of special importance in measuring the workers' attitude to the company, their work, their foremen, and their colleagues.

Written in both clear and simple language, *Industrial Psychology* contains many useful illustrations, a full index and a list of psychological tests. In this respect it differs favourably from many American texts which are long-winded and cumbersome. It should be read by all students of the subject, especially as it whets the appetite for further reading in more specialised fields of industrial psychology. MAX K. ADLER.

Industrial Leaders

Pioneers of British Industry. F. George Kay, F.R.S.A. Rockliff Publishing Corporation Ltd. 25s.

An absorbing book to anyone with even a spark of interest in British social history, this should have a place in every works educational library. Under the main headings of power, manufacture, transport and communications, Mr. Kay relates how Britain's leadership in industry and commerce was built up by men of widely differing backgrounds and temperaments, but all bringing to the adventure of progress and invention their qualities of enterprise, courage and perseverance.

More Industrial Canteen Staffs to be Trained in Emergency Feeding

By THE EDITOR

If the gas or electricity failed, how would the factory be fed? This question has to be faced by all industrial C.D.Os. The answer lies in the extended training plan for industrial canteen staffs announced last month by the Minister of Food.

This transportable kitchen unit can produce 1,600 emergency meals at one cooking. Equipment includes Bluff cooker, six Soyer boilers, two 100-gall. water tanks, six trestle tables, etc.

ANOTHER responsibility for those concerned with industrial Civil Defence was referred to by the Minister of Food, Major G. Lloyd George, when he addressed civic heads, chairmen of committees and local authority officers concerned with Civil Defence at Central Hall, Westminster, on December 2.

Industry, said the Food Minister, must learn to feed itself in an emergency. He called on local authorities to extend their training arrangements to include the managements and staffs of industrial canteens so that they would be trained in the construction and use of improvised cooking equipment. "One of the hazards we have to face . . . is the possibility of the interruption of gas and electricity supplies." As a very large proportion of industrial canteens relied upon these services, it was essential that they should be able to improvise cooking methods in order to avoid the dispersal of their workers at meal times, and the consequent disorganisation of output schedules. Further, if industrial canteens could look after themselves in trouble, the call upon the local authority's emergency feeding service would be correspondingly reduced.

In Great Britain there are now 195 emergency feeding authorities—they are, of course, embodied in the local authority. Firms who wish their canteen staffs to be trained in improvised feeding should get in touch with the emergency feeding authority, if there is one in their town. Otherwise, the local Civil Defence Officer should be approached.

Training is based on the two latest Civil Defence pamphlets to be issued by H.M. Stationery Office—No. 2A, *Welfare Section (Emergency Feeding)*, price 1s. 9d., and No. 2B, *Welfare Section (Improvisation of Large Scale Cooking Equipment)*, 1s. 3d. Pamphlet No. 2A is both a training manual and the basis of any plan for factory feeding in an emergency.

In training industrial catering staffs, local authorities will concentrate on *improvised* feeding, as distinct from emergency feeding. The difference between the two methods is largely a matter of equipment. Trainees will be taught how to improvise equipment for the cooking and serving of meals, and for ensuring ample supplies of hot water for washing up. They will learn—with the aid of Pamphlet No. 2B—how to make, from scrap material, simple, practical cookers, boilers, etc., of the types successfully used for many years by the Army. In this type of training, it is assumed that the canteen and all its equipment have been blitzed; the caterers must make do with any scrap there may be lying about.

The drill for emergency feeding, on the other hand, involves the use of manufactured equipment, such as transportable kitchen units, Soyer boilers, insulated food containers, preparation tents and even vehicles (welfare van, water tankers and so on).

Forward-looking industrial Civil Defence organisers, while ensuring that their welfare section is fully trained in improvising cooking appliances, will no doubt be considering the desirability of carrying at any rate some of these manufactured items against the evil day.

The Ministry of Food, whose efficient emergency feeding arrangements in World War II did so much to keep up the spirits of the bombed-out, have now given a strong lead to Civil Defence. They hope it will be followed by both the Civil Defence Corps and industrial Civil Defence units.

In the words of a member of the Ministry's emergency meals division: "If the emergency meals officer has not already roped them in, we hope every firm will see that he does so, quickly."

Improvised boiling plate and oven, made from a dustbin, a grating, ¼ in. metal sheet, "pug" and bricks.

Mechanical Handling Saves 50 Hours

MECHANICAL handling, colour and lighting were the main subjects discussed at the third national technical congress of the French Institut National de Sécurité at Avignon. The institute, which is under the control of the government, has as its primary object the improvement of safety and health standards in French industrial establishments.

One speaker described tests in simple handling operations which his firm had made. One of these, employing crates of such size that a man could carry only one at a time, produced the following figures:

Time taken by one man to carry 1,000 crates a distance of 100 metres—55 hr.

Time taken by motorised truck—10¼ hr.

Time taken by fork lift truck—5 hr. 33 min.

Many speakers praised the stillage system used with either hand or mechanical trucks. Such methods, it was said, greatly reduced the incidence of handling accidents, but safety officers must take precautions against new hazards arising from mechanical causes and the circulation of vehicles. Efficient maintenance, better housekeeping and the provision of adequate gangways and floors now assumed a greater importance than ever before.

Speakers on lighting admitted that in many French plants, this subject had not yet received the attention it deserved. A doctor suggested that every industrial medical officer should have an ophthalmic qualification. Various speakers outlined the advantages of fluorescent lighting, but several gave a warning against the alleged harmful effects of short wave ultra-violet radiations emanating from tubes placed too close to a worker's eyes. Flicker and stroboscopic effect—causes of discomfort and possibly of accidents—could be overcome by correct phasing and positioning.

Value of Colour

It seemed to be generally recognised that the intelligent use of colour could do much to secure the well-being of the worker and prevent accidents. There is as yet no standard colour code in France, but the Association Française de Normalisation has issued a code similar to the standards which have been widely discussed and, to a certain extent, adopted in Britain and the U.S.A. There is now a tendency to adopt these in France also.

Wage Increases

TOTAL increase of £159,000 in the weekly wages of about 615,000 workers during October, 1952, was recorded in the November issue of the *Ministry of Labour Gazette*. There was a decrease of about £17,000 in the wages of some 246,000 workers due to sliding scale agreements based on the retail prices index which fell in August and September.

The index of wage rates was 131, five points higher than at the end of 1951, while the index of retail prices was 138, eight points higher than at the end of 1951.

Unemployment Rises

DUKING the four weeks October 13 to November 10, the number of unemployed increased by 8,500 to 406,400, about 2 per cent of the total of employed persons. But in the same period the number of unemployed in the textile industry decreased by 11,800. Unemployment was again highest in Scotland—3.4 per cent, and North-Western Region—3.1 per cent, and lowest in the Midlands .7 to 1 per cent.

Union Membership Up

TRADE union membership totalled about 9,480,000 at the end of 1951, the highest figure yet recorded. These figures, given in the November issue of the *Ministry of Labour Gazette*, refer to all employee organisations not only to those affiliated to the T.U.C. The Ministry lists 704 unions, among them being 138 with less than 100 members and 184 with less than fifty members. The number of unions continues to decrease, however, mainly as a result of amalgamation.

Disputes Machinery

TALKS have been resumed between the Engineering and Allied Employers' National Federation and the Confederation of Shipbuilding and Engineering Unions concerning the unions' proposals for replacing the present machinery for avoiding disputes by a new joint industrial council.

The present arrangement, which was agreed in 1922, provides for disputes to be discussed first at shop floor level, then by works conference, then by local conference and finally by central conference. The unions have complained of the delay in settling disputes caused by this system, but their main objection is to its limited scope.

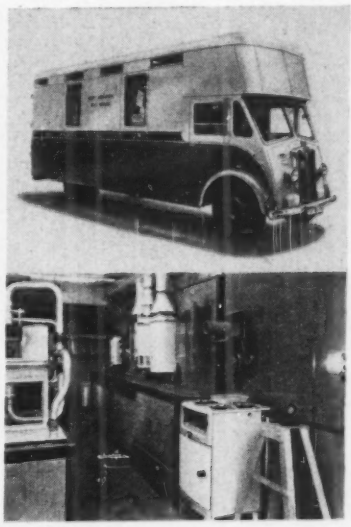
The functions of a joint industrial council go beyond the settlement of disputes and provide for regular consideration of wages, hours and working conditions in the industry, as well as such wider issues as measures for regularising production and employment, the encouragement of the study of processes, design and research, and the representation of the needs of the industry to the Government. The employers previously rejected the proposal for a joint council for the industry, but finally agreed to re-examine the matter.

Dock Release Scheme

BECAUSE of rising unemployment in the docks, the National Dock Labour Board has drawn up a release scheme to encourage dock workers to find temporary employment in other industries for periods up to two years. The scheme is voluntary, and its success will depend on whether the men co-operate.

Under the new scheme the National Board will decide the number of men who may be released in each area. The name of each man will be entered on a "dormant" register. If he is needed during 1953 he will be given the opportunity of returning at once, but his name will still remain in this section of the register if he chooses to remain in other employment. The following year the local board will have the right to recall him at any

TRAINING VEHICLE



This mobile service instruction unit has been put into service by the West Midlands Gas Board. It is fitted with an extensive range of gas appliances, varying from a cooker to a small furnace, and is being used in the training of apprentices and fitters.

time and if he fails to return his name will be removed from the register. If he is still on the "dormant" register in January, 1955, when it is proposed the scheme should end, he will be reinstated on the "live" register. If he fails to apply before February, 1955, he will be removed from the register permanently and forfeit all rights of reinstatement.

Raising Productivity

SUGGESTIONS for raising productivity in industry, put forward at the first meeting of the British Productivity Council, included more pooling of information so that firms could see how problems were tackled in other factories; visits by groups of managers and workers to Continental factories; discussion by members of Anglo-American productivity teams of their experience in trying to spread information since they had returned home. This latter point was prompted by the feeling that the work of the sixty-six teams which visited the United States was not being followed up adequately by British industry.

Joint Consultation

JOINT meetings between management and employees of British European Airways were held recently to discuss ways and means of improving the corporation's efficiency and prosperity. With Peter Masefield, chief executive of B.E.A. in the chair, they discussed operations, use of manpower, budgets, revenue and expenditure, and the organisation's policies and prospects.

Employee representatives serving on local departmental committees or sectional councils of British Railways are meeting management representatives at a series of five-day conferences held at the Isle of Wight. These meetings are designed to give railwaymen concerned with staff relations a greater insight into the practicability and value of joint consultation.

Ask The Teacher

EMPLOYERS are advised by the Minister of Education in a recent pamphlet, to ask the teacher or the youth employment officer for an assessment of a pupil's potentialities rather than rely on the "school cert."

Under the old examination system for the School Certificate a pupil had to attain the required standard in three main groups of subjects. It was the group, and not the individual subject, by which success or failure was assessed. The new examination, however, is a subject examination and schools have more freedom to extend the list of subjects to meet their needs. The examination is not designed for school-leavers as such, and the Minister states that school reports "can be a good deal more informative, at any rate for many purposes of local employment." It is also emphasised that the new examination system should not be regarded as static. In particular, "consideration must be given to the special examination needs of candidates whose education has had a technical bias."

FIRST AIDERS IN ACTION

The Hon. Mrs. Leslie Gamage, C. St. J. County Supt., Berkshire, accompanied by Horace F. Parshall, director general, St. John Ambulance Association, recently visited the Witton works of the General Electric Co. Ltd., to see for themselves the important part played in industry by the members of the association. At this works there are two ambulance divisions, one nursing division and two cadet divisions. Picture shows a mock casualty being treated by members of the ambulance division.

Wages News

CHEMICAL WORKERS—The employers' side of the Joint Industrial Council for the Chemical Industry has rejected the employees' claim for a wage increase of 2d. per hour. The claim has been referred to arbitration.

ENGINEERING WORKERS—A claim for substantial wage increases for draughtsmen, clerical and scientific workers in the engineering industry has been submitted to the Allied Employers' National Federation by the three unions.

About 200,000 women in the engineering industry have been awarded a wage increase of 6s. 5d. per week, with proportionate increases for girls under 18. This follows the recent increase of 7s. 4d. a week to adult male workers in the industry.

An increase of 7s. 4d. a week has been granted to engineering and shipbuilding workers employed in the Royal dockyards.

GAS STAFFS—National Joint Council for Gas Staffs has agreed that graduated increases on existing salary scales for men ranging from £5 to £20 a year, shall be operative from January 1; women's salary scales will be increased by 80 per cent of these amounts.

MINERS—A wage claim on behalf of more than 400,000 day-wage men has been submitted by the union to the National Coal Board.

RAILWAY SHOPMEN—Men employed in railway workshops have been awarded an increase of 7s. a week. About 120,000 workers are affected by the rise which gives a new minimum of £6 16s. 6d. to a skilled fitter and £5 17s. 6d. to a labourer. The employees' side are now seeking new scales for apprentices, youths and women.

TEXTILE WORKERS—Employers in the cotton and rayon textile industry have rejected a claim by the unions on behalf of 265,000 spinning and weaving operatives for an all-round wage increase of 10 per cent on current earnings.

TOBACCO WORKERS—The national joint negotiating committee for the tobacco industry have agreed to wage increases of 4s. a week to men over 21 and 3s. to women. New national basic rates are 130s. a week for men and 92s. for women (Scale 1 rates).

Personal Column

Miss Dorothy Cadbury, a managing director of Cadbury Bros. Ltd., retired last month. Since Miss Cadbury went to Bournville in 1917 she has taken a keen interest in every aspect of women's employment, and few women in this country have a wider knowledge of women in industry and women in management. She spent her first year at Bournville working alongside girls in the factory and two years later became head forewoman and then managing director. In addition to her activities at Bournville, she was a member of the Paper Box Wages Council and of the International Association for the Study and Improvement of Human Relations and Conditions in Industry, and devoted a considerable amount of her leisure time to youth work.

Sir Arthur P. M. Fleming, C.B.E., the well-known scientist and engineer, was inaugurated president of the British Association for Commercial and Industrial Education in London last month.

George W. Outwin, safety officer at Pilkington Bros. Ltd., has retired after 32 years' service with the company. Mr. Outwin was the first secretary of the Doncaster Accident Prevention Committee, and a founder-member of the Doncaster Branch of the Association of Supervisory Staff, Engineers and Technicians.

J. B. Newton, M.A. has been appointed to succeed Dr. Brown as warden of Burton Manor. Mr. Newton was chief university officer to the United Kingdom High Commission in Germany.

In Brief

H.R.H. The Duke of Edinburgh has consented to become patron of both the Industrial Welfare Society and of the British Association for Commercial and Industrial Education.

* * *

National Industrial Safety Exhibition will be held at Scarborough from May 29-31, 1953. Industrial safety training courses will be held at Wadham College, Oxford, from March 16-28 and from September 14-26.

* * *

First residential school for training work study officers has been set up by the British Institute of Management at the College of Aeronautics, Cranfield. There will be three courses of ten weeks each year; fee 200 guineas inclusive.

* * *

Oxford University has accepted an annual grant of £1,500 for three years from the National Coal Board for research into hot and humid conditions in mines. The Board's own technical and medical staff will co-operate.

* * *

New safety rules for merchant ships came into force on November 19, 1952, when the Merchant Shipping (Safety Convention) Act, 1949, became operative.

During the first nine months of 1952 there was a reduction of 14,748 in the number of civil servants. The total employed at October 1, was 673,687, the lowest for ten years.

* * *

Measures for the better protection of health and safety of foundry workers were contained in a private member's Bill presented by Miss M. Herbison, M.P. (North Lanark).

* * *

Number of people registered under the Disabled Persons (Employment) Act totalled 875,043 at October, 1952, compared with 880,243 three months earlier.

THE MINISTER SAID . . .

Answers to Questions in the House

Disabled Persons.—The Government had accepted the recommendation of the National Advisory Council on the Employment of the Disabled that a further inquiry should be held into all aspects of the rehabilitation and resettlement of disabled persons. The composition and terms of reference of this inquiry were under consideration.—(*Minister of Labour and National Service,* November 18.)

British Institute of Management.—Consideration was being given to the continuance of the Government's grant of £50,000 a year to the British Institute of Management.—(*President of the Board of Trade,* November 18.)

Human Factors.—Proposals for setting up two joint committees to advise on matters relating to the study of human factors in industry—one on individual efficiency and the other on human relations, contained in the memorandum submitted by the Director of Scientific and Industrial Research and the Medical Research Council, were under consideration; the composition of the proposed committees would be announced soon.—(*Parliamentary Secretary to the Ministry of Works,* November 25.)

Apprentices' Tax Allowances.—Income tax allowances to parents or apprentices were discussed in this year's Finance Act debate when the limit of earnings at which child allowances ceased was raised from £13 to £26. The matter was being considered by the Royal Commission and a more radical review must await the findings of this Commission.—(*Financial Secretary to the Treasury,* November 27.)

Coal Miners.—Average age for all coal miners was 40.5 years and 39.1 years for face workers.—(*Minister of Fuel and Power,* November 28.)

Pneumoconiosis.—In the first half of 1952 there were 456 new cases of pneumoconiosis registered under the National Insurance (Industrial Injuries) Acts and fifty-three under Workmen's Compensation Acts, among miners in South Wales.—(*Minister of Fuel,* December 1.)

Clothing Industry.—Representatives of employers and unions in the clothing industry had agreed to set up a joint voluntary body to replace the Clothing Industry Development Council, which had been dissolved. Its functions would include research into production, marketing, quality and design, training of personnel, etc., and funds from surplus assets of the Development Council would be made over to assist the new body.—(*Parliamentary Secretary to the Board of Trade,* December 1.)

Industrial Code.—The Minister of Labour hoped to put before the National Joint Advisory Council proposals for an industrial code, the aim of which would be to encourage the adoption of enlightened standards in industry. It was not the Government's intention to introduce legislation on the subject, though it was hoped Parliament would approve the recommended standards.—(*Parliamentary Secretary to the Ministry of Labour,* December 2.)

National Services' Hostels.—Grants to the National Services' Hostels Corporation Ltd. had been increased from £995,000 in 1951-52 to £1,250,000 for 1952-53 to provide for accommodating additional workers transferred to meet the needs of the defence programme, and to met increased running costs which would not be wholly covered by increased charges to residents.—(*Minister of Labour,* December 4.)

New Canteens No. 1.

Modern Canteen for Hosiery Workers

By WINIFRED GODE

This is the first in a new series of articles on canteen design and equipment. In alternate monthly issues we shall publish reports of new canteens showing layout, equipment, and ideas for solving structural problems, etc., which we hope readers will find useful in planning to build or re-organise their own canteens.

THIS attractive canteen, recently opened at Howard Ford and Co. Ltd., Liverpool, hosiery manufacturers, has facilities for cooking and serving meals for 1,600 people. The main canteen (Fig. 1) provides accommodation for the women operatives who form the majority of the employees, while a smaller section is reserved for the men. In addition, there is a dining room for office staff and one for executives.

The general colour scheme is cream and pale green, and the large windows add to the bright and spacious effect. A kiosk serves cigarettes and confectionery. There is also a separate snack counter, and hot water is supplied to those who wish to make their own pots of tea.

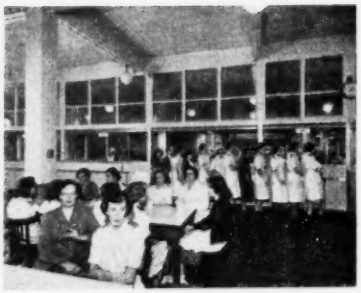
In the main canteen, cafeteria service is both speedy and economical (Fig. 2). The stainless steel counter is 60 ft. long; half this counter serves the women's canteen and the other half the men's. There are six 8 ft. hot cupboards with bain marie tops, a 4 ft. section with a plain top, and an 8 ft. tea service section in the centre. Metal roller shutters completely shut off the kitchen from the dining rooms (Fig 4).

The kitchen is large and well planned, and fitted with the most up-to-date equipment (Fig. 3). This equipment includes four ovens; central island range, Regulo controlled; three steaming ovens; a 27 in. griller; two three-pan fish fryers; four 20-gallon vegetable boiling pans; and a four-compartment pastry oven.

Additional storage space for preplated meals is given by a back service counter of three 8 ft. cupboards with bain marie tops, and doors on both sides for through service. Ten thousand pieces of crockery an hour can be handled by a steam-heated, deluge-type automatic dishwashing machine. The kitchen is efficiently ventilated, getting twenty complete air changes an hour. Cooking smells and combustion fumes are extracted via two wired glazed canopies over the island cooking site.

The canteen is in operation 24 hours a day and, in addition to main meals, deals with all tea breaks, which are taken in staggered shifts in the canteen. Catering is the responsibility of a manageress, and under the general supervision of the welfare officer.

Excellent meals are available to employees—meat or fish course, 10d.; sweet, 4d.; tea, 1½d.; soup, 4d. With meals at these prices the canteen is, of course, subsidised by the company. Staff and executives pay a little extra for waitress service, but otherwise have the same meals.



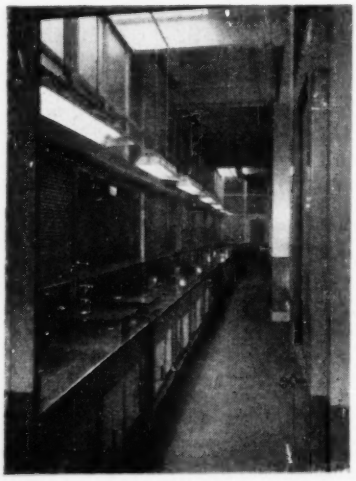


Fig. 1. Luncheon in progress in the main canteen is enlivened by a band show. Concerts are held about once a month.

Fig. 2. The service counter is divided into sections for speedy distribution of meals. The tea section also serves the men's canteen which is the other side of the barrier.

Fig. 3. This view across the service counter is taken from the men's canteen, and shows part of the well-equipped kitchen.

Fig. 4. The service counter, showing hot cupboards. Note the metal shutters which, when drawn completely, shut off the kitchen from the dining rooms.

(Rowe Bros. Ltd., photo.)

"This is the Tops!"

"What is? — the new bonus scheme, or these new table tops?"

"Both, the management certainly look after us one way or another."

"Well, this stuff brightens the old canteen up; best of it is, it doesn't seem to burn or scratch, and you know how careless some of these lads are!"

"Peggy says it makes their work much easier — just wipes it over — 'Looks as nice as ever', she says."

"Bet my missus would like some of this at home — wonder what it's called?"

"DECORPLAST—*so the manager told Peggy —I think I'll enquire where I can get some.*"

"Good idea. Come on, there's the hooter—can't sit in the Ritz all day, you know!"

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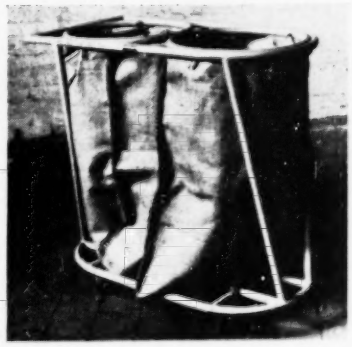
Readers who wish to have more particulars of any of the products referred to in this section are asked to write to the Editor, quoting the reference number which appears at the end of the paragraph.

We are always glad to consider for publication descriptions—preferably accompanied by an illustration suitable for reproduction—of new products.

HANDLING

Waste Paper Carrier



THIS waste paper carrier is easy to handle and steer, and a comfortable height for all statures.

It is claimed to save "running about with waste paper baskets," and is navigable along corridors, in lifts, through doorways and between the office desks.

Ordinary sacks are secured to the mouth-hooks by finger and thumb movement. The whole construction is rounded to obviate damage to furniture or decorations. **(PM/578.)**

Handy Hoist

HERE is a hoist that weighs only 5 lb., yet it is designed to lift loads up to 2 cwt. (tested to 3 cwt.), and has a lifting range of 5 ft.

A self-sustaining brake is fitted and the turning effort on the handle is said to be only 18 lb. when raising 2 cwt. The plate link chain is within the body of the unit, thus giving protection and facilitating carrying and storage. **(PM/579.)**

SAFETY

Insured Safety Shoes

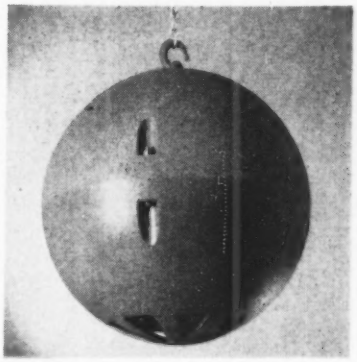
SO confident are the manufacturers in the extra protection afforded by this brogue-type of safety shoe that they have included a full insurance policy with every pair sold in the United Kingdom. This gives the wearer a cover of £1,000 in case of death or £10 weekly for up to six weeks in case of disablement following a foot injury incurred while wearing these shoes.

An interesting feature of this footwear is that the uppers are sewn with special rot-proof thread, and soles stitched with acid- and rot-proof Terylene. **(PM/580.)**

COMMUNICATION

Spherical Speaker

OF interest to welfare officers is this new public address speaker, which is claimed to give remarkably even sound distribution. It incorporates an 8 in. or 10 in. moving coil unit mounted in a spherical aluminium alloy casting. As the case is made in two



halves, it can be used either as a complete sphere, when it resembles a spherical light fitting, blending in with lighting and decorative schemes, or as a single hemisphere for flat mounting on wall or ceiling. By combining two of the slotted hemispheres it can be used as a duo-diffuser. Power-handling capacity is up to 6 watts. Being waterproof the speaker is suitable for both indoor and outdoor use. The makers claim that, owing to the lack of directional effect in these speakers, it is often difficult to detect that sound reinforcement is being employed.

The speaker is finished in grey crackle stove enamel, and incorporates a high flux 8 in. unit and multiratio matching transformer. **(PM/581.)**

CANTEEN

Trolley Shop

HERE is a three-tiered trolley which can be used in large canteens, works, etc., for the selling of cigarettes, sweets, chocolates, stationery, toilet accessories and other such sundries. The top tier is shallow and carries a mahogany-finished cash till, a drawer for the operater's use, scales and a special compartment for cigarettes which can also be displayed in a window running the length of the rear side. The two other tiers can be used as a shop window with the aid of eight removable trays, in aluminium with

engine-turned finish. These trays can also carry six 7 lb.-capacity glass display jars, if required, set at an angle for easy access, as shown in the illustration.

The trolley is enclosed in ⅛ in.-thick clear Perspex with sliding doors on the service side. These move in detachable felt-lined channels. For quiet, easy running the unit is mounted on either 5 in. or 7 in. diameter spring-loaded, rubber-tyred castors. Push rails at both ends are of polished aluminium welded to aluminium side brackets. The chassis is of welded steel construction with 16-gauge polished aluminium exterior facings. **(PM/582.)**

Fish Fryer

THIS new improved model fish fryer is gas-operated and has an aluminium roll top. Suitable for canteen use, it has twin burners fitted to each pan below and ventilating flue fitted to each fryer. The whole fryer can be completely dismantled for cleaning. Each pan measures 20 in. × 16 × 7½ in. 14 G.

The body is insulated with asbestos to conserve the heat and ensure low gas consumption. The construction is

of steel throughout and the stand is finished in metallic blue.

This fryer can be supplied as a three-pan unit or with larger pans to order. Overall measurements as illustrated: 35 in. wide, 22 in. deep, 46 in. high. **(PM/583.)**

New catering model pressure cooker is equipped with inset pans, wire basket and cooking rack and registers both temperature and pressure. It has a liquid capacity of 13¼ quarts.
(PM/584.)

BETTER HOUSEKEEPING

New De-mister

NOW being produced to prevent the steaming up of all types of glass in cold or damp weather this new type of window-cleaning de-mister is designed to save time and temper, as well as reduce accidents in factories. Transport drivers will find this solution a boon for keeping driving mirrors and reflectors clear. Apart from preventing windows from steaming over, the solution can be applied to spectacles, thus ensuring clear vision at all times to workers who invariably suffer inconvenience and embarrassment from steamy glasses on entering a warm factory atmosphere. Applied with a soft dry cloth, after first drying the surface of the glass, which is then polished in the ordinary way, the de-mister remains effective for several days. Large-sized containers are produced for factory use, and there are handbag and pocket phials for workers.
(PM/585.)

Hygienic Floor Oil

IT is claimed that this floor oil thoroughly penetrates wood floors, restoring to the wood its inherent quality which is often lost in the course of time; stops splintering; leaves the surface non-slippery, dust-free and easy to sweep. Free from creosote and unpleasant smells, the oil is said to need application with a cotton mop every six months only, to do away with scrubbing (as dirt cannot cling to the surface any more) and to be suitable for wood blocks or parquet floors, because it checks expansion and contraction.

Floors can be washed every day without counteracting the lasting effect of this floor oil. **(PM/586.)**

Liquid Plastic Coating

UNDER the provisions of the Factories Act a new liquid plastic coating comes within the category of

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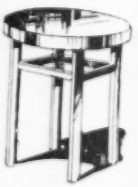

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oil paints which need to be renewed only once every seven years. It can be applied by brush or spray to almost any surface, whether porous or non-porous, including wood, plaster, concrete, asbestos sheeting, stonework, wallboard, stucco, brick, glass and previously painted surfaces. The coating has a quick drying action so that a second coat can be applied in 3-4 hr. Besides being non-inflammable and containing fire-resisting properties, this emulsion paint is said to be washable, unaffected by organisms, odourless and non-poisonous.

(PM/587.)

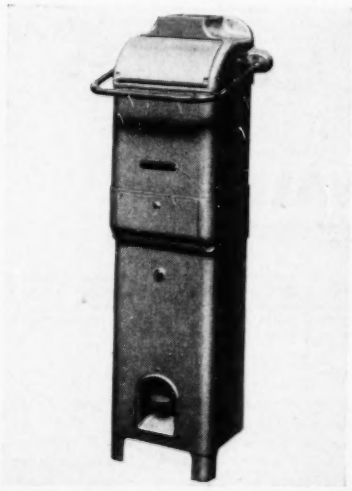
HYGIENE

Sanitary Incinerator

THE manufacturers of this automatic incinerator have taken pains to suppress smoke from it by inducing a draught. To ensure continuity of operation a spare element located below the pedestal cover is supplied with each unit.

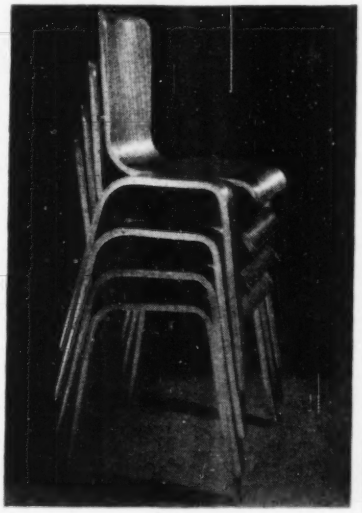
The body is of cast aluminium fixed to steel angles and enclosed by enamelled sheet steel. The ash pan comprises a formed steel pressing and the element platform is an electrical- and heat-resisting block. The element itself is a solid nickel-chrome rod. The heat insulated ash disposal door is fitted with a slot-type coin-operated catch and is hinged from the bottom. Pedals enable the user to operate the incinerator by foot, pressure on the pedal opening the charging door at the same time starting the time switch. Two types of flue adaptor are available enabling the flue to rise vertically from the unit or be taken back through the wall.

Built in below the incinerator cover are main and sub-fuses. The conduit entry is provided at the base. An indicating lamp glows when the main switch is closed and gives a bright red light when the igniting element is in operation. The incinerator is designed to cater for a personnel of from 50 to 100, and is suitable for 100-250 volts A.C. **(PM/588.)**



SEATING

Laminated Stacking Chairs



A NEW stacking chair for canteens, lecture rooms, etc., made its bow on television recently. Of wood, it is moulded by high-frequency press at the rate of two minutes per chair. Among the advantages claimed for it are that it is light to handle; has no joints, screws or nails; is hygienic; contains no dust traps; and is easy to clean. **(PM/589.)**

SECURITY

Watchman's Patrol Unit

THE watchman's patrol system, of which this control unit is the centre, comprises a network of two-way switches placed at strategic positions throughout the factory. The control unit, to which the switches are wired, is a low voltage mechanism with automatic numerator, synchronous clock, etc. Frequency of patrols can be determined by the management beforehand.

On the panel one of two red warning lights is illuminated when it is time for the first patrol to start. The watchman then visits each check point, throwing each switch. If, when he returns to the unit, he has visited every point,

the light is extinguished; if he has not, the light will remain illuminated until the omission has been made good. This must be done within the period set for the patrol or else the numerator will not register a completed round. When the next patrol is due the other red light is illuminated.

If the watchman fails to complete his round in the time allotted, or if the wiring is severed or the unit tampered with, the alarm will operate automatically, as it will if the electric supply is cut off. The alarm takes a number of forms—continuous loud-ringing bells, buzzers, lights or an automatic telephone call to a pre-determined number, e.g., 999. **(PM/590.)**

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Summary of Official Publications

READERS' GUIDE TO ACTS, STATUTORY ORDERS, NEW RULINGS AND AWARDS CONCERNING INDUSTRY AND PERSONNEL

BILLS

National Insurance (Industrial Injuries) Bill. Dated November 19, 1952. To provide for payment of benefit to people in insurable employment who suffer injury (not being injury by accident) through exposure to risks inherent in their employment.

STATUTORY INSTRUMENTS

No. 1928. The Aerated Waters Wages Council (England and Wales) Wages Regulation Order, 1952. Dated November 5, 1952, made by Minister of Labour and National Service under Section 10, Wages Councils Act, 1945(a). *H.M.S.O.* 4*d.* (Revokes Orders A.(43) and A.(45), and fixes new statutory minimum remuneration payable. Operative from November 21, 1952.)

No. 1938. The Tin Box Wages Council (Great Britain) Wages Regulations (Amendment) Order, 1952. Dated November 7, 1952, made by Minister of Labour and National Service under Section 10, Wages Councils Act, 1945(a). *H.M.S.O.* 3*d.* (Amends Order X.(40) by increasing statutory minimum remuneration payable. Operative from November 21, 1952.)

No. 1964. The Baking Wages Council (Scotland) Wages Regulation Order, 1952. Dated November 11, 1952, made by Minister of Labour and National Service under Section 10, Wages Councils Act, 1945(a). *H.M.S.O.* 6*d.* (Revokes Orders BKS(19) and BKS(23) and fixes new statutory minimum remuneration payable. Operative from November 28, 1952.)

No. 1976. The Rubber Manufacturing Wages Council (Great Britain) Wages Regulation Order, 1952. Dated November 12, 1952, made by Minister of Labour and National Service under Section 10, Wages Councils Act, 1945(a). *H.M.S.O.* 6*d.* (Revokes Orders R.U.(33) and R.U.(36) and fixes new statutory minimum remuneration payable. Also amends Order R.U.(34) by (a) providing conditions subject to which remuneration in lieu of customary holidays shall be payable, and (b) altering the method of calculating holiday remuneration in the case of part-time workers. Operative from November 28, 1952.)

No. 1990. The Linen and Cotton Handkerchief and Household Goods and Linen Piece Goods Wages Council (Great Britain) Wages Regulation Order, 1952. Dated November 14, 1952, made by Minister of Labour and National Service under Section 10, Wages Councils Act, 1945(a). *H.M.S.O.* 4*d.* (Revokes Order H.L.(38) and fixes new statutory minimum remuneration payable. Operative from November 28, 1952.)

No. 2002. The Hair, Bass and Fibre Wages Council (Great Britain) Wages Regulation Order, 1952. Dated November 18, 1952, made by Minister of Labour and National Service under Section 10, Wages Councils Act, 1945. *H.M.S.O.* 4*d.* (Revokes Order H.B.(39) and fixes new statutory minimum remuneration payable. Operative from December 8, 1952.)

No. 2004. The Sack and Bag Wages Council (Great Britain) Wages Regulation (Holidays) Order, 1952. Dated November 19, 1952, made by Minister of Labour and National Service under Section 10, Wages Councils Act, 1945(a). *H.M.S.O.* 4*d.* (Revokes Orders S.B.(15) and S.B.(31) and fixes holidays allowed and holiday remuneration payable. Operative from December 10, 1952.)

No. 2010. The Brush and Broom Wages Council (Great Britain) Wages Regulation (Amendment) (No. 2) Order, 1952. Dated November 20, 1952, made by Minister of Labour and National Service under Section 10, Wages Councils Act, 1945(a). *H.M.S.O.* 3*d.* (Revokes Order M.(71) and amends Order M.(67) by increasing statutory minimum remuneration payable. Operative from December 8, 1952.)

No. 2027. The Retail Drapery, Outfitting and Footwear Trades Wages Council (Great Britain) Wages Regulation (Amendment) (No. 2.) Order, 1952. Dated November 24, 1952, made by Minister of Labour and National Service under Section 10, Wages Councils Act, 1945(a). *H.M.S.O.* 3*d.* (Amends Order R.D.O.(10), as amended by Order R.D.O.(12), by increasing the amounts to be reckoned as wages in lieu of payment in cash where employer provides board and lodging. Operative from December 15, 1952.)

No. 2028. The Retail Food Trades Wages Council (England and Wales) Wages Regulation (Amendment) Order, 1952. Dated November 24, 1952, made by Minister of Labour and National Service under Section 10, Wages Councils Act, 1945(a). *H.M.S.O.* 3*d.* (Amends Order R.F.C.(11) by increasing the amounts to be reckoned as wages in lieu of payment in cash where employer provides board and lodging. Operative from December 15, 1952.)

Draft. Police Pension Regulations, 1952. Dated ..... made by Secretary of State for Home Affairs, in conjunction with the Treasury, under Sections 1 and 3, Police Pensions Act, 1948(a) and Section 2, Police Pensions (Increase) Act, 1952(b). *H.M.S.O.* 6*d.* (Amend the 1948

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Regulations by providing certain increases in widows' pensions and children's allowances; alter certain provisions regarding age of compulsory retirement of members of forces serving before the 1948 Regulations came into force; etc. Operative from December 15, 1952.)

Draft. Police Pensions (Scotland) Regulations, 1952. Dated ..... made by Secretary of State for Scotland, in conjunction with the Treasury, under Sections 1 and 3, Police Pensions Act, 1948(a), and Section 2, Pensions (Increase) Act, 1952(b). *H.M.S.O.* 6*d.* (Amend the 1948 Regulations by providing certain increases in widows' pensions and children's allowances; alter certain provisions regarding age of compulsory retirement of members of forces serving before the 1948 Regulations came into force; etc. Operative from December 15, 1952.)

Draft. The Clothing Industry Development Council (Dissolution) Order, 1952. Dated ..... made by the Board of Trade under Section 8, Industrial Organisation and Development Act, 1947(a). *H.M.S.O.* 4*d.* (Provides for winding up and dissolution of the Clothing Industry Development Council. Operative from January 1, 1953.)

GENERAL

Heating and Ventilation in Factories. Welfare Pamphlet No. 5. Issued by the Ministry of Labour and National Service, Factory Department. (5th edition.) *H.M.S.O.* 7*s.* 6*d.*

Accidents: How They Happen and How to Prevent Them. Vol. 13. Issued by the Ministry of Labour and National Service, Factory Department, October, 1952. *H.M.S.O.* 9*d.*

Repair of Drums or Tanks: Explosion and Fire Risk. Safety Pamphlet No. 18. Issued by the Ministry of Labour and National Service, Factory Department, November, 1952. *H.M.S.O.* 1*s.* 6*d.*

First Report of the Advisory Committee on Publicity and Recruitment for the Civil Defence and Allied Services. Issued by the Home Office, Scottish Home Department and Ministry of Health, Noember, 1952. Cmd. 8708. *H.M.S.O.* 6*d.*

Civil Defence. Manual of Basic Training Vol. 1. Welfare Section: Improvisation of Large Scale Cooking Equipment. (Pamphlet No. 2B.) Issued by the Home Office, November, 1952. *H.M.S.O.* 1*s.* 3*d.* (See also page 300.)

Civil Defence. Manual of Basic Training. Vol. 1. Welfare Section: Emergency Feeding. Pamphlet No. 2A. Issued by the Home Office, November, 1952. *H.M.S.O.* 1*s.* 9*d.* (See also page 300.)

INDUSTRIAL COURT AWARDS

No. 2420. Railway Shopmen. Reference: That gatemen and watchmen employed under railway workshop staff conditions be guaranteed full conditions of service applicable to other grades, including extra payment for night duty. Award: Claim not established. (13/11/52.)

No. 2421. Entertainment Industry. Reference: For payment of specified rates to members of symphony orchestras belonging to the Orchestral Employers' Association. Award: Musicians on continuous contract: Principals £16 a week; 2nd principals £13; others £11; Musicians casually employed: per concert—principals £3 4s.; 2nd principals £2 14s., others £2 6s. The Court referred back for negotiation by the parties the conditions of employment of continuously employed musicians. (17/11/52.)

INDUSTRIAL DISPUTES TRIBUNAL

AWARDS

No. 258. Rates of Wages in the Leather Producing Industry. Claim: For substantial wage increase for all workers. Award: Increase of 2d. per hour to adult male and female time-workers, with proportionate increases to juveniles; piece-workers to receive a flat rate payment of 2d. per hour in addition to present piecework earnings. (23/10/52.)

No. 259. Terms and Conditions of Employment of Professional Football Players in Scotland. Claim: For specified terms and conditions of employment. Award: The Tribunal awarded a minimum retaining wage of £7 a week for full-time professional players in "A" Division and £5 a week to part-time players, and £3 a week to those in "B" Division. Players selected for international matches to receive a bonus of not less than £50 per match. "Talent money" to be paid for certain League matches. Other items in the claim were referred back to the parties for further discussion. (28/10/52.)

No. 260. Wage Rates of Certain Semi-skilled Machine Operators Employed by an Engineering Firm in Lancashire. Claim: For increase of 11s. a week under terms of engineering agreement of November, 1950, and for computation of overtime, night shift and holiday credit payments. Award: In favour of increase for semi-skilled workers whose basic rates were 4s. a week below that of skilled workers. (28/10/52.)

No. 261. Wages and Conditions of Employment of Certain Workers in the Scalemaking Industry. Claim: For revision of rates and conditions of employment of service adjusters. Award: (1) Increase of 3d. per hour in differential rates at present paid over district rate for skilled engineering fitters Grade A1 and 2d. per hour for Grade A2; (2) Increase of 2s. 6d. per day in "out allowance." (29/10/52.)

No. 262. Terms and Conditions of Employment of Certain Workers Employed by the West Hartlepool Corporation. Claim: For implementation of agreement of the Joint Negotiating Committee for Local Authorities' Services (Building and Civil Engineering Craftsmen). Award: In favour of claim. (29/10/52.)

No. 263. Rates of Wages in the Wool Textile Industry in Scotland. Claim: For increase of 10s. a week to adults, with proportionate increases to juniors. Award: Minimum rates of time workers to be increased by 7s. 6d. per week for men and 5s. for women, with proportionate increases for juniors; group minimum average piece rates to be 10 per cent above corresponding time rates. (30/10/52.)

No. 264. Rates of Wages of Workers in the Mechanical and Hydraulic Leathers Manufacturing Industry. Claim: For substantial wage increase. Award: Increase of 1½d. per hour for adult workers with proportionate increases for juniors. (3/11/52).

No. 265. Rates of Wages of Workers Employed in the Manufacture of Leather Belting. Claim: For substantial wage increase. Award: Increase of 2d. per hour to adults, with proportionate increases for juniors. (3/11/52.)

No. 266. Annual Holiday Credits in Respect of Two Workers Formerly Employed by a Firm of Toy Manufacturers in London. Claim: That company should grant holiday credits to two workers in accordance with terms of agreements covering the engineering industry. Award: In favour of claim. (4/11/52.)

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THE MONTH'S DATES

Management Diary for January

Carlisle and District Management Association

Jan.
- 13 "The Professional Aspects of General Management." G. Marchand.
- 20 "Good Communication: The Effect on Employee Relations." A. C. Leyton.

Illuminating Engineering Society
- 7 "Colour as a Framework to Industry." Mrs. D. M. Buckland. Welfare Club Hall, City of Edinburgh Lighting and Cleansing Department, 357 High Street, Edinburgh. 7 p.m.
- 8 "Colour as a Framework to Industry." Mrs. D. M. Buckland. Institution of Engineers and Shipbuilders of Scotland, 39 Elmbank Crescent, Glasgow, C.2. 6.30 p.m.
- 8 "Lighting in the Food Industry." R. L. C. Tate. Demonstration Theatre, North Western Electricity Board, Town Hall Extension, Manchester. 6 p.m.
- 13 "Power Station Lighting." P. D. Figgins. Lighting Service Bureau, 2 Savoy Hill, London, W.C.2. 6 p.m.

Industrial Welfare Society
- 9-12 Works Managers' Conference. Hydro Hotel, Llandudno.
- 18 "Club Management: accounts, records, general administration." (Sports and Social Clubs.) 48 Bryanston Square, London, W.1.
- 19-23 "Human Relations in Industry for Junior Executives." 48 Bryanston Square, London, W.1.
- 19 Supervisors' Discussion Group. 48 Bryanston Square, London, W.1. 6 p.m.
- 20 "Common Law Claims." 48 Bryanston Square, London, W.1.
- 21 "Canteens." Acton.
- 22-Feb. 12 "Diagnosis of our Times" (Course). 48 Bryanston Square, London, W.1. 6 p.m.
- 22-Feb. 12 "Positive Health in the Factory" (Course). 48 Bryanston Square, London, W.1. 6 p.m.
- 26-27 "Industrial Law" (Tutorial Course). 48 Bryanston Square, London, W.1.
- 27 Women Supervisors' Course. Liverpool.
- 27 Editors' Meeting. Liverpool.
- 28 Women Supervisors' Course. Manchester.
- 28 "Youth Employment Services." J. Wales Smith. 48 Bryanston Square, London, W.1. 2.30 p.m.
- 29 "Manual Lifting and Handling." Hull.
- 29 "Canteens." Wolverhampton.
- 29 "Introducing an Apprentice Training Scheme." 48 Bryanston Square, London, W.1. 9.30 a.m.

Institute of Industrial Supervisors
- 7 "Industrial Law." A. M. B. Rule. College of Technology, Suffolk Street, Birmingham. 7.30 p.m.
- 15 Brains Trust. Chamber of Commerce Hall, Portsmouth. 7.30 p.m.
- 15 "Supervisory Management Training." New Inn Hotel, Pontypridd. 7.30 p.m.
- 16 "Communications and the Supervisor." I. C. Rees and A. Loveridge, Kings' Head Hotel, Monmouth.
- 23 "The British Industrial Future." S. Waugh. Unity Hall, Stockport. 8 p.m.
- 27 "The Foreman and the Factories Acts." W. T. Hewins. Leicester College of Technology. 7.30 p.m.
- 27 "The Iron and Steel Productivity Team Report." J. Wadsworth. Lecture Hall, Steel, Peech and Tozer, Rotherham. 7.30 p.m.

Institute of Personnel Management
- 8 Discussion Meeting for Senior Personnel Officers. London.
- 6 "Working Together." F. Salter. College of Technology and Commerce, Cardiff. 6.45 p.m.
- 6 "Social Aspects of Personnel Management." Miss B. N. Secar. Station Hotel, Newcastle. 7 p.m.
- 8 "Problems of Wage Adjustment in a Period of Fluctuating Trade." G. R. Moxon. Management House, 8 Hill Street, London, W.1.
- 11-16 Residential study course on "Employment." Richmond.
- 12 "Leadership." Maj.-Gen D. Wimberley. North British Hotel, Glasgow. 7 p.m.
- 13 "Mental Well-being in an Industrial Society." J. Munro Fraser. Imperial Hotel, Upper Temple Street, Birmingham. 6.30 p.m.
- 13 "Opinion." W. Duncan (Youth Employment Officer) and J. Shaeffer (Personnel Superintendent, A.E.U.). Queen Hotel, Chester. 7 p.m.
- 13 "Induction and Follow-up." G. Satow. Westgate Hotel, Newport. 6.45 p.m.
- 14 "Effective Public Speaking." Miss J. L. Wilkins. Gas Showrooms, Parliament Street, Nottingham. 6.30 p.m.
- 15 "The Meaning of Work." Dr. T. A. Lloyd Davis. 25 Charlotte Square, Edinburgh. 7 p.m.
- 19 "What Higher Management Expects of Personnel." J. A. Stafford. Ministry of Labour, Charles Street, Leicester. 7 p.m.
- 20 "Responsibility of Supervisory Staff in Modern Methods of Production." F. A. Mullineux. Technical College, Manchester Road, Bolton. 7.30 p.m.
- 21 "Recent Developments in Industrial Law." Dr. J. Tarsh. Radiant House, Bold Street, Liverpool. 7 p.m.
- 27 "Master and Servant." Judge F. Raleigh Batt. Engineers Club, 17 Albert Square, Manchester. 6.30 p.m.
- 28 "Personnel Management." T. P. W. Norris. Midland Hotel, Bradford. 6.30 p.m.
- 29 "The Shop Steward in Industry Today." F. D. Baker. Sperry Gyroscope Co., Gt. West Road, Brentford. 7 p.m.
- 30 "Running a Meeting." A. C. Leyton. Heriot Watt College, Edinburgh. 6 p.m.

Institute of Economic Engineering
- 9 "Work Study as a Means of Improving Industrial Efficiency." R. M. Currie. Cowdray Hall, Henrietta Place, Cavendish Square, London, W.1. 7 p.m.
- 16 Discussion Group. The George Inn, Enfield. 7.30 p.m.
- 23 Discussion Group. The Bulstrode Hotel, Hounslow. 7.15 p.m.

Institution of Production Engineers.
- 9 "Motion Study—Some Practical Applications." R. Craven. The Public Library, Ipswich. 7.30 p.m.
- 12 "Foremanship." A. P. Young. The White Swan Hotel, Halifax. 7.15 p.m.
- 13 "A Lecture on Lecturing." R. Parmenter. James Watt Memorial Institute, Great Charles Street, Birmingham. 7 p.m.
- 19 "Mechanical Handling." J. Carruthers and R. M. Williams. The College of Art, Green Lane, Derby. 7 p.m.
- 19 "That this house believes that a practical training is of more value to industry than an academic training." Debate. Library Lecture Hall, Luton. 7.30 p.m.
- 21 "The Human Factor in Industry." John Munro Fraser. James Watt Memorial Institute, Great Charles Street, Birmingham. 7 p.m.
- 21 "The Training of Supervisors." J. R. Armstrong. Marlborough Room, Grand Hotel, Bristol 1. 7.15 p.m.

Institution of Works Managers
- 6 "Welfare." B. W. Roome. Grand Hotel, Sheffield. 7.30 p.m.
- 12 "A Different Way of Looking at the Process of Management." W. B. D. Brown. Grand Hotel, Manchester. 6.45 p.m.
- 13 "The Training of Supervisors and Workers." Mr. Hayes. Starkie House, Starkie Street, Preston. 7.30 p.m.
- 28 "Machines and Men." Prof. Burstall. Cleveland Institute, Middlesborough. 7.30 p.m.

National Institute of Industrial Psychology
- 5-9 Selection Methods. Course I. London.
- 7 Supervisors Extended Course. London.
- 12-16 Residential Course for Supervisors. Wedgwood Memorial College, Nr. Stoke-on-Trent.
- 14 Supervisors Extended Course. London.
- 21 Supervisors Extended Course. London.
- 22 Vocational Guidance Discussion Groups—Series II. London.
- 22 Conference. Doncaster.
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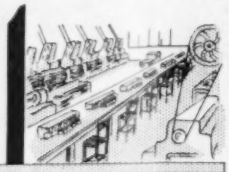

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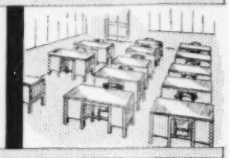

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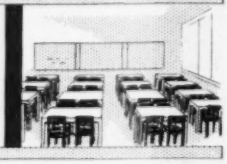

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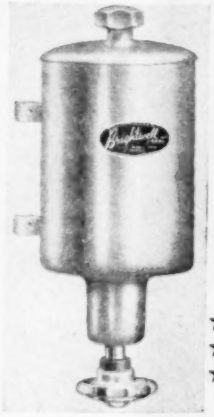

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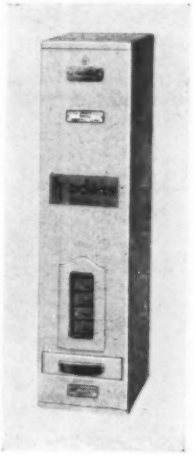

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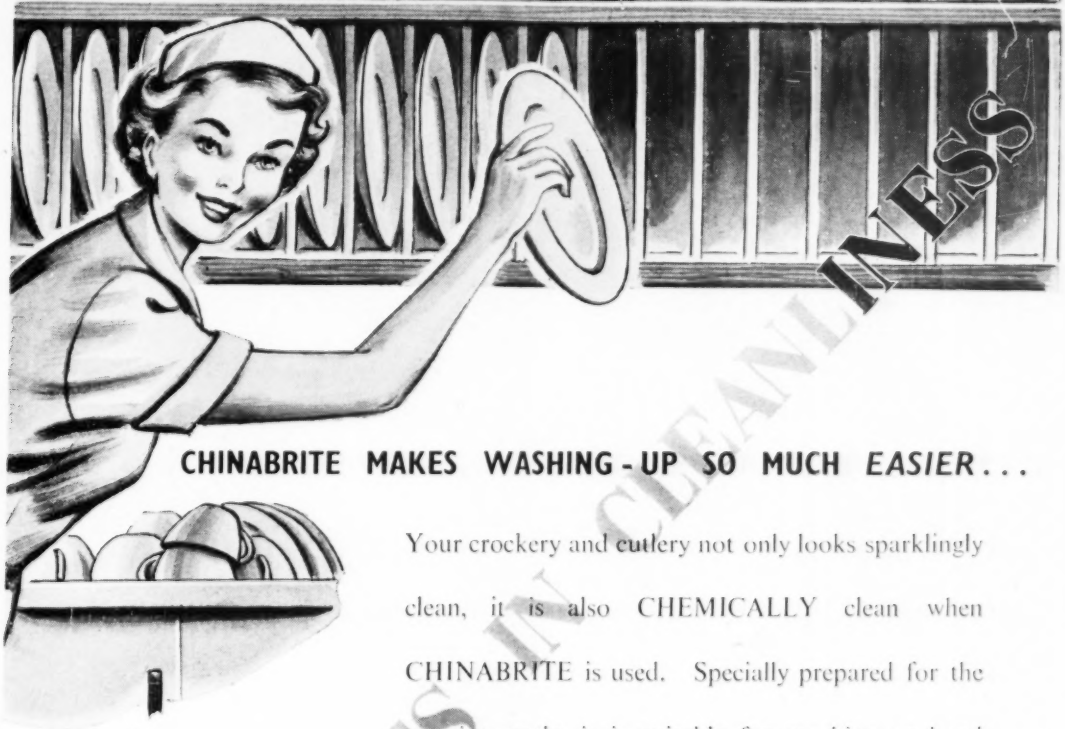

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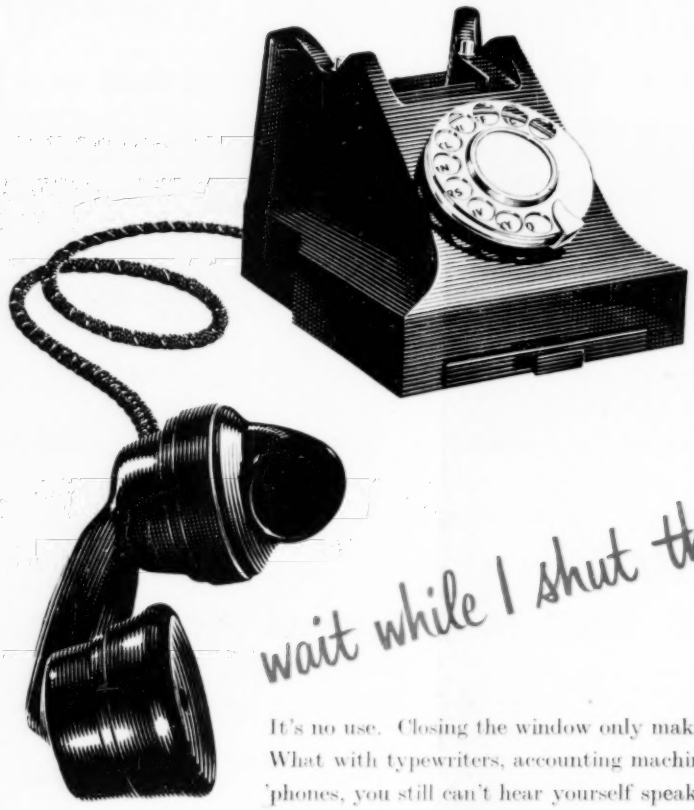

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